NO WAY TO GO

TRANSPORT AND SOCIAL DISADVANTAGE IN AUSTRALIAN COMMUNITIES

EDITED BY **GRAHAM CURRIE, JANET STANLEY** AND **JOHN STANLEY**

MONASH University
ePress

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FOREWORD

Limited physical access to employment, education and social opportunities could result in poverty, low education levels, low paid jobs or unemployment and poor health.

Addressing transport and social disadvantage issues will provide positive benefits for both the individual and the community.

While considerable research has been undertaken into the fields of transport and social disadvantage, very little of this research has examined the interrelationship of these two areas. In particular to what extent do these two areas influence one another? What is the scale and nature of social disadvantage? In what ways is transport part of the problem and potentially part of the solution? How can intervention best be planned and delivered?

To encourage and promote research and debate on this matter, the Victorian Government supported the first international *Transport, Social Disadvantage and Wellbeing Conference* that was held in 2006. Further, through *A Fairer Victoria* and *Meeting Our Transport Challenges*, the Government has announced a number of initiatives to assist those who are socially disadvantaged. We are improving all modes of public transport to increase access to employment, educational and social opportunities for those most in need.

No Way To Go: Transport and Social Disadvantage is an important step to improving knowledge, and promoting new ideas and options. Future research will assist to understand the complexities and interrelationship of transport and social disadvantage issues. It will contribute towards developing new approaches and new ways of thinking of the issue, leading to real improvements in the lives of those who will otherwise be marginalsed.

I wish to congratulate those involved in producing this publication and welcome further debate and future research in this important field.

Lynne Kosky
Minister for Public Transport

A NOTE ABOUT PAGINATION AND CHAPTER IDENTIFICATION

Page numbers in this book do not run consecutively across chapters. Instead, page numbering restarts on the first page of each chapter and is prefaced by the chapter number. Thus 01.1 is chapter one, page one; 01.2 is chapter one, page two; 02.1 is chapter two, page one; 02.2 is chapter two, page two; and so on.

As page numbering restarts at the beginning of each chapter, page numbers are not listed in the Table of Contents

This system, in which page numbering is self-contained within each chapter, allows the publisher, Monash University ePress, to publish individual chapters online.

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Chapter Number

INTRODUCTION

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This book brings together international and Australian researchers to examine links between transport disadvantage and impacts on social exclusion in the Australian context.

A major aim of the book is to explore the issue of transport disadvantage. Unemployment, poor skills, low income, bad housing, old age and poor health have been identified as factors limiting participation of individuals in social and economic life as well as access to transport. It is not the intention of this book to see the adequate provision of transport as the ultimate or only solution to social disadvantage. Rather, the proposed focus is to provide a factual basis for its influence such that the appropriate position of transport as part of the solution might be identified.

To this end, this introduction considers the causes of disadvantage as an important context for the book. This is considered prior to outlining the structure and form of the book.

BOOK RATIONALE

There is growing interest in the concept of sustainable land transport systems, as governments wrestle with problems such as the high and growing costs of traffic congestion, an unacceptable road toll, air pollution and rising greenhouse gas emissions from motorised transport, obesity associated with reduced mobility and more general concerns about the social consequences of poor mobility/accessibility. In terms of the triple bottom lines of economics, environment and social impacts, it is generally recognised that the social dimension is least understood and developed.

Urban sprawl and sparse living are pervasive in Australia. Despite high levels of car ownership, there are many people who do not have access to a private car for their travel needs. This affects marginalised groups in society including many young people, those on low incomes, seniors, Indigenous Australians and those with disabilities. These people can experience difficulties in accessing services and activities. If unaddressed, this problem can severely limit opportunities for participating in activities that meet personal, social and economic needs.

Transport and social exclusion is now a principle research and policy field in the UK where evidence suggests the problem is growing as the population is ageing, families relocate to car dependent suburbs and as the costs of car dependence increase with fuel prices.

Australia lacks a comparable research and policy emphasis. This is surprising since car dependence and sparse low density living is a much greater feature of Australian than European and even North American society. Australian researchers such as Dr David Hensher at the (then) Commonwealth Bureau of Roads and Dr Jenny Morris at the (then) Australian Road Research

Board worked partly in the area of transport disadvantage during the 1970s and early 1980s. Subsequently, in the early 1990s, the Federal government undertook several studies of locational disadvantage (Department of the Prime Minister and Cabinet 1992; Travers Morgan 1992). These studies found that disadvantage occurs everywhere but was more pronounced on the urban fringe and in rural areas, because of poor access to services and employment.

These studies were broad in nature and have been criticised for not demonstrating counter behaviours in transport advantaged areas (Carson and Martin 2001). They are also now dated and precede continued Australian urban sprawl, new trends such as 'sea change' migration to car dependent areas and increasing costs of fuel for car use. There is also a need to see the Australian transport disadvantaged problem within the context of the relatively new European work in this field.

Even though the Australian research base is scant, some State Governments have recently decided to invest very significant sums in increasing provision of public transport services specifically to increase travel options available to transport disadvantaged groups. This investment is part of what is now being termed the 'social transit' agenda. This has increased the urgency of both adding to the Australian research base and more widely disseminating the knowledge that is available, to ensure effective targeting of social exclusion through improved mobility/accessibility.

This book brings together international and Australian researchers to examine links between transport disadvantage and impacts on social exclusion in the Australian context. A particular emphasis of the book is to explore the wider personal and social implications of lack of access to transport on individual and community wellbeing. The book includes international researchers who provide a global context for the Australian experience. Research examining the experience of young Australians, those with low incomes, the unemployed, seniors, people with a disability and Indigenous Australians is outlined. Implications for Australian social and transport policy are detailed including a description of what is increasingly being termed the 'social transit' agenda.

A major aim of the book is to explore the issue of transport disadvantage. Unemployment, poor skills, low income, bad housing, old age and poor health have been identified as factors limiting participation of individuals in social and economic life as well as access to transport (Social Exclusion and Cabinet Office 2001). It is not the intention of this book to see the adequate provision of transport as the ultimate or only solution to social disadvantage. Rather, the proposed focus is to provide a factual basis for its influence such that the appropriate position of transport as part of the solution might be identified.

To this end, this introduction considers the causes of disadvantage as an important context for the book. This is considered prior to outlining the structure and form of the book.

THE CAUSES OF DISADVANTAGE

Poverty, disadvantage, deprivation, and social exclusion are all terms used to communicate the concept that some people are less well off than others. These terms relate to a deficit model. A similar situation is reflected in the raft of terms used to describe a positive state, such as welfare, utility, wellbeing and happiness. These terms lack precise differential definitions. This blurring of terms is in part due to political agendas or ideology as well as the variations between how

particular disciplines and professional groups define, approach and understand similar issues. It is also due to the evolving and iterative nature of the discourse around disadvantage.

Poverty was the first widely used term to describe an absence of wellbeing. This work, led by Townsend (1979) in the United Kingdom, strongly linked poverty to an absence of financial resources. Indeed, Anderson undertook leading research on the measurement of poverty in Australia in the 1960s. In the 1980s and 1990s, much policy work was based on the premise that an increase in wealth is the equivalent of increase in wellbeing. This influence led to the development of 'poverty lines' where a person is considered to be in poverty if their income falls below a particular level. The provision of welfare aimed to move people above this line in order to achieve a minimum standard of living. Welfare was given in a context of passivity of recipients and a 'rights-based' agenda. However, recent research suggests that improvements in wealth mirror increases in happiness or wellbeing only to a certain point, beyond which on-going increases in wealth do not result in commensurate increases in happiness (Manderson 2005). Thus, it would seem that disadvantage is a more complex notion than simply an absence of a certain level of financial resources.

In 1997, the Blair government in the UK established the Social Exclusion Unit, marking the start of a popularisation of a different discussion on disadvantage. Social exclusion is said to relate to specific issues: unemployment, poor education, poor health, housing and transport poverty, as well as low income. Particular groups in society experience disadvantage more than other groups, such as children, elderly, recent migrants, single parent families, Indigenous people, those with a disability, and those who are rurally isolated. Social exclusion broadly refers to what can happen when people or areas suffer from a combination of linked and mutually reinforcing problems (SEU 2003). The Social Exclusion Unit produced a series of reports on particular issues relating to groups of people at risk of disadvantage, such as the elderly and children, and on particular problems connected to disadvantage, such as homelessness and the need for access to goods and services. An important impact of the discourse on social exclusion is that it has placed social policy more firmly on many political and government agendas particularly in the UK, and to a less extent, in Australia. The term is not generally used in the US context.

Two streams of thought in relation to disadvantage are holding particular currency at present. The first of these relates to a revival of an understanding about community. Of particular influence is the notion that disadvantage can relate to both an individual and a community of place or of interest. The concept of locational disadvantage is strongly influencing the social policy of the Blair government in the UK, as well as some Australian governments who are targeting resources in areas where there are multiple disadvantages. For example, the present strategic plan of the Federal Department of Family and Community Services states that achieving strong communities is one of the major outcomes for the Department (FaCSIA 2006). Living in a highly disadvantaged neighbourhood diminishes the opportunities to draw on 'community resources', such as business networks and educational opportunities. Strong communities are said to deliver more positive outcomes, which include 'increased employment opportunities, higher rates of social and civic participation, better educational performance by children, lower rates of crime, and improved physical and mental health' (Shields and Wooden 2003, p. 1).

The economist Amartyr Sen is also presently influencing the field of social policy. He has moved the discussion beyond egalitarianism to an idea of 'capability equality', which 'enables serious consideration of the divergent conditions, opportunities and goals of individuals (Jayas-

uriya 2006, p. 42). Thus, this concept acknowledges diversity and posits that individuals should be able to map out their own life choices from a base-line of equality of capabilities. Thus, disadvantage can be viewed as the absence of one or more capabilities to achieve greater inclusion in society.

The notion of capabilities is increasingly being adopted. For example, The United Nations' Human Development Report 2001 states that development is about 'expanding the choices people have to lead lives they value' (United Nations 2001, reported in Eckersley 2004). It is about 'much more than economic growth, which is only a means, if a very important one, of enlarging people's choices'. The Brotherhood of St Laurence, a major non-government welfare organisation in Australia, is developing a series of social barometers which document the present levels of capabilities of individuals at various life stages (Scutella and Smyth 2006). The Cape York Peninsula is adopting a capabilities approach to social policy on Indigenous wellbeing (Cape York Institute 2006).

There are a range of views about what these broad capabilities should be. The United Nations' Human Development Report 2001 says that fundamental to building human capabilities are the ability to lead long and healthy lives, to be knowledgeable, to have access to the resources needed for a decent standard of living and to be able to participate in the life of the community (Eckersley 2004, pp. 29, 30). Nussbaum (2005, p. 41), a theorist with a significant history of thought on the notion of wellbeing, has outlined the following central capability targets:

- A normal length of human life
- Physical health
- Bodily integrity (freedom from violence, sexual satisfaction and reproduction choice)
- Being able to use senses to imagine, think and reason – thus also having access to an adequate education, freedom of speech and religion
- Being able to express emotions – attachment, being able to experience full emotional development
- Practical reason – being able to form a conception of good and engage in planning of one's life
- Affiliation – being able to live with others and having the social bases of self-respect and treated as a dignified human being
- Concern for other species
- Control over one's environment – participation in political choices and material capacities such as property rights, employment

While it is possible to remove and add items to such a list, such as to include leisure and recreation, few would argue with the essential nature of these human needs. The issue becomes the provision of opportunities to enable the achievement of key capabilities. There is a need to address 'persistent inequalities and disadvantages… through a principled commitment to affirmative action, to getting all citizens above the threshold on all the major capabilities' (Nussbaum 2005, p. 43).

There remains considerable variability of opinion as to why there is a requirement for the government to address disadvantage. It is argued that disadvantage needs to be addressed on the moral grounds of equality (a continuation of the rights argument) and on the grounds of improving

social cohesion which is more likely to occur where there is less inequality (Vinson 2004). Others argue on economic grounds: the more a person is able to function independently in society, the less the associated costs to government and the greater will be the associated investment in the economy through the person's subsequent productivity (Smyth 2006). There is some evidence for this position. A longitudinal study in the child welfare field has demonstrated a benefits to cost ratio of 8.74 for investing in disadvantaged young children in the United States (Heckman 2006).

While lists of capabilities are useful, they do not inform on either 'how much' of the basic capability is needed or what has to be done to achieve these outcomes for people. The editors of this book believe that an 'operational' level needs to be added which outlines the resources needed to enable people to achieve these capabilities and overcome disadvantage. Such a list would include, law and order structures, a framework of human rights, good governance structures, personal support systems, and infrastructure – civic buildings, parks and the subject of this book, public transport. Thus, improving the capacity for inclusion encompasses exploring the broad spectrum of wellbeing, and understanding where the capacities of individuals are being diminished due to government policy inadequacies. In short, this book argues strongly for an integrated link between economic and social policies to address disadvantage.

Social policies in transport have mostly centred on issues of safety and physical access for people with a disability. For example, US federal public transport assistance, through the Safe, Accountable, Flexible, Efficient Transportation Equity Act (SAFETEA), has targeted employment access, elderly individuals and individuals with disabilities (SAFETEA 2005). Particularly arising from the work of the Social Exclusion Unit in the UK, there are also concerns about the unequal distribution of transport mobility benefits between different social groups and/or different areas, particularly as this relates to people without private car access in communities that have become increasingly car-dependent (SEU 2003). Paratransit/community transport services, more generally, have been developed, although on an ad hoc basis rather than through a coordinated social policy approach, to meet some access needs of (usually) narrowly defined target groups.

Despite a broadening approach to 'social transit' goals of public transport, the potential contribution of achieving these social goals remains insufficiently understood and poorly defined. Hence the benefits of the 'social transit' agenda remain unclear. The literature gives scant and isolated references to the interface between transport and disadvantage. An exception is a recent major study undertaken in the European context on age and mobility (Mollenkopf et al. 2006c). While not particularly targeting disadvantage, they found a 'striking' relationship between mobility and quality of life and found groups with particular unmet needs included those with features of disadvantage: aged with low income, impaired health and rural isolation (Mollenkopf et al. 2006a, p. 287; Mollenkopf et al. 2006b). A major Australian study to develop indicators of disadvantage has found that a 'nexus of connections between housing, location and transport' emerged as playing a major role in determining the overall standard of living for many (Saunders and Sutherland, 2006, p. 36).

Additionally, the linkages between public transport and the achievement of broader social policy goals, in fields such as employment, child welfare and education, have not been adequately explored. This significantly undervalues the contribution of public transport to individual and community wellbeing. Pickup and Giuliano make a similar point when they argue that:

> While the two policy areas [transport policy and social policy] are clearly interrelated, there appears to be an absence of dialogue between the transport profession (trying to clarify the link between transport strategies and social exclusion) and mainstream social policy makers, who currently pay scant attention to transport related issues (Pickup and Giuliano 2005, p. 40).

The critical importance of establishing a dialogue can be seen in relation to Australian federal government policy. We have noted that the present political ideology has moved from a passive state of the receipt of 'welfare', where the aim is only one of providing the minimum necessities in life, towards one where there is perceived to be a need for the disadvantaged person to change and achieve inclusion and participation in the market economy (Jayasuriya 2006). While Sen's theory postulates that people should have the capabilities to choose various possible outcomes of how they live, the current Australian federal policy environment does not leave the choice entirely open to individuals. There is the notion of mutual obligation, that is, the receipt of welfare comes with certain obligations to do certain tasks. This can be illustrated in the area of unemployment, where receipt of unemployment benefits is conditional on the person undertaking certain tasks such as, job training and minimum levels of job applications.

If such policies are to be effective, there is a need to ensure that people are provided with minimum capabilities to enable them to meet the terms decreed in mutual obligation legislation. There are suggestions that this is not necessarily happening. For example, in a recent study on barriers to employment, a lack of accessibility to transport was said to prevent four per cent of study participants in inner metropolitan Melbourne, 14 per cent in outer metropolitan Melbourne, and 28 per cent in non-metropolitan Melbourne, from getting a job (Perkins 2005). Thus, there are strong indications that one such essential capability which needs to be fostered by the government is in the area of transport. The failure to provide adequate levels of effective public transport would seem to further compound disadvantage for many people and communities.

BOOK STRUCTURE AND FORM

SECTION 1: INTRODUCTION

Building on the preceding discussion about the causes of disadvantage, the book moves to paint a high level picture of links between social policy and transport policy in an Australian context over the last century or so. In this overview, Professor Paul Smyth reminds us of the short history of social policy in the transport field. Traditionally, transport has been viewed from an economic paradigm, with market forces being seen as important in determining transport needs. However, there has been a recent review of this position and an increasing recognition of the important role of transport in addressing disadvantage and the need to facilitate the capacity to participate to prevent on-going welfare dependency.

SECTION 2: INTERNATIONAL PERSPECTIVES

The editors have then sought to build on international experience, which forms an important context for this field. Hence the second section of the book considers views from two leading international authors. International experience is not always directly relevant to Australian

conditions, so those authors have been asked to identify lessons relevant for Australian circumstances.

Professor Sandi Rosenbloom points out that the language of social exclusion is not central to US transport policy, which is more based around concepts of rights and fairness in terms of the positive benefits and adverse impacts from transport service and infrastructure provision. The rights-based approach is firmly rooted in legislation but narrowly framed in terms of target groups. Rosenbloom's message is that drawing links between transport and social exclusion is complex and that packages of policies are needed to have any real impact. She emphasises the importance of gaining a clear understanding of the conditions that create social exclusion for particular groups.

The UK has led much of the international work on linkages between transport and social exclusion. **Professor Julian Hine** outlines UK experience, which is somewhat unique because of the complexities created by public transport de-regulation outside London. This has increased the difficulty of targeting public transport services to disadvantaged groups and led to considerable growth in the voluntary sector, called community transport in Australia. One benefit of this trend has been the growth in experimentation with alternative service delivery models in low demand contexts. Hine notes that linkages are increasingly developing between providers of specialist demand responsive services and mainstream public transport operators, which should lead to more efficient outcomes. He also brings out the accessibility-planning basis which lies at the heart of much of the UK work on transport and social exclusion.

SECTION 3: AUSTRALIANS WITHOUT TRANSPORT

It is not possible to write a book of this nature without considering people and places, since transport is essentially about overcoming the spatial gap between people and place! So the third section of the book has been devoted to the specific issues of individual Australians in either social groups or parts of the country where transport disadvantage is known to be an issue. These sections of the book examine group and even personal experiences illustrating the complex processes which affect lack of access and the implications this has for the people and places involved. Authors in each of these sections have been asked to focus on the dynamics of disadvantage in each of these circumstances and to identify the role of transport in influencing this.

Professor David Hensher reminds us that mobility is essential to sustaining inclusion in an ageing population. The car is the dominant mode of transport in Australia and will remain so for seniors, so must be a central part of any social inclusion focus for seniors. As the population ages, Hensher notes the importance of transport systems and services changing to meet changing needs. This has important implications for road authorities, including local councils, who need to ensure their roads are senior friendly. Car manufacturers must focus on making their offerings more attuned to the specific requirements of an ageing population. Governments and public transport operators face particular requirements of ensuring that adequate universal systems are available, that more flexible service options are developed (e.g. more demand responsive) and that communication with an ageing client group is improved, many of whom do not have a drivers licence (particularly older single women).

Browning and Sims raise many similar issues to Hensher but with a stronger focus on the transition between driving and non-driving among older people. They emphasise the importance of mobility choices for older people and of planning the transition between driving and non-

driving. The increased risks of driving in old age are contrasted against the potential loss of social connectedness if driving stops, unless adequate alternatives are available.

These authors point out some shortcomings among available alternatives and argue for a more co-ordinated approach, such as between public and community transport to meeting the mobility needs of older people. They also review evidence on whether driving tests should be mandatory for older drivers, finding that the focus should be on targeting those at high risk of unsafe driving due to specific health risk factors.

Currie and Allen highlight how mobility is vital to the wellbeing of people with a disability. They identify that these people tend to take fewer trips than average, suggesting that this outcome is more due to lack of opportunity than to any lesser demand levels. They note that it is not uncommon for people with a disability to often suffer from another source of transport disadvantage, such as low income, unemployment or older age. This raises the question of whether improved transport options might sometimes deliver multiple benefits (e.g. from improving employment prospects). Their chapter considers a range of travel options for people with a disability, finding many problems. As the population ages and disabilities become more common, they see much higher demand for services directed at the needs of this group. Adding this to the legal requirements imposed by Australia's Disability Discrimination Act, they see pressing needs for more integrated and holistic approaches to finding and delivering mobility solutions.

Transport difficulties faced by young Australians are outlined by **Professor Graham Currie**, highlighting how the desire for increasing independence, as young people grow older, clashes with a lack of travel options to meet their needs. Currie identifies young people living on the urban fringe and in regional/rural areas as facing the greatest transport problems. Activities for young people that are most constrained by a shortage of travel options are education, employment and social/recreational opportunities. Currie raises a theme that recurs throughout the book: that a key means of improving travel opportunities on the urban fringe and in regional/rural areas, to reduce social exclusion, is to improve public transport. Improvements to spatial coverage, frequency and operating time spans/days and improvements to the level of co-ordination within public transport and between public transport and community transport are major gaps identified.

Currie and Senbergs discuss transport disadvantage confronting Australia's Indigenous communities. These are particularly complex issues, because Indigenous communities often experience multiple sources of disadvantage, with remote communities being likely to be very transport disadvantaged. While reliance on the car among Indigenous communities is high, particularly in remote areas, ownership levels are low and costs of car use high. This compounds mobility difficulties. The chapter illustrates particular transport issues raised by Indigenous cultural considerations and identifies how transport disadvantage may be reduced, taking these sensitivities into account. Importantly, it concludes that '…if steps can be made to address some of the transport issues raised in this chapter it is clear that a significant step in addressing educational, health, economic and social barriers will have been achieved'.

Dr Anne Hurni illustrates issues of transport disadvantage through a study of the travel needs of two groups located at Western Sydney, unemployed young people and single parents. She highlights the importance of differentiating between 'travel needs' and 'transport needs' in order to clearly understand the problems and solutions. She highlights the misfit between the current provision of public transport services which are targeted towards the commuter and the different

needs of the two groups studied, recommending a much stronger role in relation to transport planning be undertaken by local government.

Dr Jago Dodson explores the often forgotten element of the transport disadvantage problem, the urban planning systems which have generated the Australian urban form that create disadvantage. The history of urban form development in Australia is described including the emergence of suburban motorisation and associated car dependence and disadvantage. Dodson critically reviews contemporary urban planning responses pointing out gaps between rhetoric and action in providing feasible transport alternatives on the urban fringe. He calls for concrete steps towards addressing car dependence highlighting the emerging problems of climate and oil dependence as new drivers of change.

SECTION 4: LESSONS FOR POLICY DEVELOPMENT

A book of this nature would be of little value unless it seeks and proposes solutions. Transport and social policy is the context within which solutions are developed and applied. For this reason the fourth section of the book considers the issues of transport and social disadvantage from a policy development context.

Victoria's Director of Public Transport, **Jim Betts**, talks about the Victorian government's new approach to addressing risks of transport disadvantage and social exclusion, through the concept of 'Social Transit'. The application of this approach is seeing significant increases in public transport service levels in outer metropolitan and regional Victoria, to provide more comprehensive transport options for 'at risk' populations. Bus service levels, in particular, are being increased to achieve this purpose.

Two chapters follow from two of the editors, **John and Janet Stanley**. Chapter 13 draws attention to the narrow view of social policy in transport that is found in the present discourse. The chapter argues that a fuller understanding of the role of transport should incorporate concepts of social capital, community strengthening, social governance and wellbeing. It is suggested that the growth of community transport, often as a response to lack of conventional public transport services, needs careful examination, as it may compound issues of social exclusion for both users and non-users of community transport. The issues are illustrated from a case-study of transport in the regional city of Warrnambool, Victoria, Australia. Chapter 14 summarises the major findings of that study, illustrating some typical transport needs of groups who are at risk of social exclusion, where transport disadvantage is likely to be a compounding factor. The study proposes implementation of minimum service standards as the policy initiative most likely to benefit substantial numbers of transport disadvantaged people. It also proposes implementation of a regionally-based approach to needs assessment and prioritisation, and to more co-ordinated service provision.

A similar approach is taken by **David Denmark** in Chapter 15. He examines mobility issues faced by transport disadvantaged groups and identifies a range of gaps that hinder achievement of end-to-end trip realisation. This highlights many of the barriers that need to be tackled to improve social inclusion from a mobility perspective. Denmark is also an advocate of a strong local/regional input into mobility planning and service delivery.

SECTION 5: CONCLUSIONS – THE WAY TO GO?

The book finishes with an assessment of overall conclusions by the editors in summation of the evidence provided in all sections. This includes some suggestions for next steps for research and policy to better focus on the problem of addressing transport and social disadvantage issues in Australian society.

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TRANSPORT: A NEW FRONTIER FOR SOCIAL POLICY?

AN HISTORICAL REFLECTION

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Transport has not traditionally been a component of social policy, being largely understood within an economic paradigm. This was compounded with the introduction of economic neoliberalism in Australia in the past two decades, with market forces restraining governments from acting in ways which would reduce transport disadvantage. However, there has been a recent growth in interest in social policy and transport, fuelled by social justice arguments as well as a growing understanding that transport is important to facilitate participation and achieve the economic outcomes relating to social investment.

INTRODUCTION

Transport has not been included in the traditional 'canon' of social policy areas. Until recently a typical social policy text would cover income support, health, housing, education, employment and social care (Alcock et al. 2003) but would not mention transport. As this book reveals, this must be considered an anomaly. As the other chapters show, transport is being taken up within a range of emerging discourses which are effectively redefining the terrain of contemporary social policy. These are chiefly the discourses of social capital, of social inclusion and of capacity or capability building. In this context, this chapter provides an overview of social policy for transport researchers concerned with disadvantage. It emphasises that decision-making about transport policy is embedded in a wider set of policy ideas and practices which involve both social and economic policy. In particular it proposes that transport is coming into its own as a social policy issue precisely because it is a key component of the economic infrastructure which enhances or inhibits people's capacity to fulfil their productive potentials.

TRANSPORT AND SOCIAL POLICY

What is social policy? In very simple terms one can say that 'social policy refers to what governments do when they attempt to improve the quality of people's lives by providing a range of income support, community services and support programs' (Bessant et al. 2005). Clearly there is a set of services which are recognised as 'social' and which demarcate them from economic, from environmental, from foreign policy and so on. However, the more we interrogate the boundaries between them – for example social and economic policy – the more the frontier becomes harder to fix.

For example, if there is highly inequitable access to transport services, what should be done? Some will demand market oriented solutions and throw the onus for a solution back on individuals. Others will see the market economy as fraught with failure requiring social interventions to resolve. This might take the form of government provided services and\or support for community based providers. Similarly if we think of the major services like health and education we find alternatives which variously emphasise the role of the state, the market and the family or wider

community. These kinds of debates cannot be resolved by any purely scientific criteria but ultimately rest on different sets of values and insights regarding when solutions are best left to the market, the government or the family and community. This complexity means that social policy does not rest on a single academic discipline like economics or sociology or political science. Rather it is a meeting place of disciplines in which each will have a legitimate influence (McClelland and Smyth 2006).

COMPARATIVE SOCIAL POLICY

Comparative social policy provides a very concrete way to think about the potential for alternative answers to any social policy question, including issues affecting transport. Back in the 1960s (Wilensky and Lebeaux 1965) and 1970s (Titmuss 1974) social policy researchers began to observe different national patterns of social policy. In particular they contrasted the residual with the institutional types of welfare state which had emerged particularly after the Second World War. The first was seen as an essentially nineteenth century construct and revealed a preference for market based economies with charities rather than governments being responsible for the 'social questions'. The institutional form arrived with the welfare state and was based on the idea of the social rights of the citizen and of the role of government in organising the society and economy so that these rights could be exercised effectively. Subsequent research elaborated this twofold typology into three: the 'liberal' (eg the United States), the 'conservative' (eg France) and the 'social democratic' (eg Sweden). The originator of this schema, Esping Andersen (1990) based it on two criteria: first, the extent to which the entitlement to income and services was taken out of the market and based on citizenship rights; and second, the extent to which state provision was aimed at reducing inequality.

Clearly it is vital for anyone considering solutions to transport disadvantage to bear in mind the influence of particular regime types and the kinds of policies they either foster or foreclose. Thus the 'liberal' welfare state would promote private transport provision. Government assistance would be means tested with strict entitlement rules and a propensity for creating social stigma around recipients. In the other types, one would be more likely to find public transport systems offering an equality of services to the highest standard. While this social policy regime type effect is not something explored extensively in the transport literature its impact on the related field of social governance and place based policies has been explored elsewhere (Geddes 2000).

TRANSPORT AND AUSTRALIAN SOCIAL POLICY – PATH DEPENDENCY

A striking insight of the welfare state comparative literature is its finding on what is called the 'path dependency' of social policy decisions. Here it becomes important to discover the key periods of social policy formation in a nation's history. These can be thought of as the occasions of 'historic compromises' when major social forces and political interests were accommodated in what became enduring, if not unalterable, institutional forms. Thus if we were to begin thinking about the pathway of transport policy making in Australia we would begin by taking account of the federation period, the Keynesian and welfare state periods and the neoliberal reaction of the 1980s and 1990s. These form indispensable contexts for thinking about likely possible future transport policy trajectories in Australia.

The Federation period in Australia is familiar to everyone as the period which established in policy terms the great Australian expectation of a 'Fair Go'. This was found notably in the wage policies which gave rise to the description of the Australian system as the 'wage earners' welfare state' (Castles 1985). But it was also found in a range of other welfare policies such as the relatively early instigation of an old age pension as well as extensive social investment in areas such as public health and education. In economic terms Australia had the largest public sector in the world and this was evident in its extensive infrastructure of services such as public transport. As Beer et al. (2003) write, this resulted in 'the nature of the economy and people's quality of life (being) broadly similar across Australia's capital cities' while 'in the country side few areas were left behind as services provided by State and Federal governments supported struggling communities'. The prominent role of government in the pattern of Australian social and economic development distinguished it notably from the United States which was much more individualistic and market led.

The rationale for government action to ensure provision of services for all citizens was rewritten in the 1940s as a result of the Great Depression. The ideas of the British economist John Maynard Keynes implanted the policy assumption that markets would not always allocate resources in the most efficient way and that governments had a macro economic role to even out the forces of supply and demand in order to keep economies at a fully employed equilibrium. In this context the continued public ownership of enterprises such as transport appeared to support government in this new role. Moreover just as the provision of income support to the unemployed, the sick and widows as well as the aged was now seen to make good economic sense because it would support demand across the economy at times of economic downturn; so now, the provision of services across the community such as education and transport could be seen as evening out people's ability to participate economically and so avoid the economic costs of what had been large scale non-participation in the economy and the personal and social costs that had come with it.

Historically then the social policy pathway in Australia was initially defined in terms of establishing economic security and opportunity for all citizens. Australia never had a 'welfare state' along European lines. However in the 1960s and 1970s, the idea of the welfare state began to take hold as a new tier of government intervention. Unexpected and sustained post-war economic growth had indeed created what Galbraith called the 'affluent society' but 'pockets of poverty' remained and a host of social issues associated with major new phenomena like mass immigration, urbanisation and the entry of married women into the labour market all called out for social intervention. Thus along side an older social policy based on economic rights such as the right to work, a new social or welfare rights based policy emerged. The public health system and free university education were notable examples. In terms of transport, the establishing of the Australian Assistance Plan and the Department for Urban and Regional Development were key developments pointing to the concept of appropriate transport services for all citizens as an issue of social entitlement.

However, the movement towards a welfare state was stillborn in Australia as an international economic recession caused a worldwide crisis of confidence in the capacities of governments to intervene successfully in either social or economic domains. In the 1980s and 1990s the assumption that positive government intervention was needed to maximise economic efficiency was turned on its head by the economic rationalist (or neoliberal) ideas of Hayek and Friedman. The eco-

nomic justification for social spending on income support and services was eroded. All public services including transport came under attack from economists hostile to public provision. Defenders, as Jordan (2006, p. 210) writes, were 'thrown back on a political justification of their advantages (in terms of equality and democracy) rather than an economic one. It was easy for economists committed to individual choice in the construction of institutions and to markets as the basis of allocations, to argue the merits of the new approach'. By the end of the century, social spending generally had come to be seen as harmful to the economy (Kangas and Palme 2005; Pierson 2001).

TRANSPORT AND THE RENAISSANCE OF SOCIAL POLICY

This brief summary of the Australian way of doing social policy reveals a moving frontier in relation to expected roles of government, markets and community. There has been a predilection to use government intervention where it is seen either as necessary to rescue markets from systemic failure (the Keynesian period) or to give people economic and social opportunities which would otherwise be unavailable (the 'Fair Go' period and the 'welfare state' period). These predilections are balanced by a preference for the free market mechanism where possible. In comparative terms, the result is a 'liberal' (United States) style social policy regime coloured by a willingness to use the state to promote economic and social opportunities for all citizens which is more along British and European lines. In the twenty first century it would seem the frontier is shifting once again. After the extreme economic liberalism of the 1990s we witnessed a slow remaking of the Australian way of doing social policy.

This remaking has been evident in the policy initiatives directed to building 'social capital', in overcoming the 'social exclusion' still evident amid affluence and finally in the rediscovery of the economic as well as social value of investing in human capital. The positive potential for these trends in terms of shaping particular policy initiatives to overcome transport disadvantage are explored elsewhere in this book. Here we canvass briefly these broad contours of the new social policy frontier as a background for considering the future evolution of transport as a new dimension of social policy research and development.

SOCIAL CAPITAL

An early indicator that the neo-liberal constraint on social policy might be loosening was the rediscovery of the 'social' associated with the widely popular work of Frances Fukuyama on 'trust' and Robert Putnam on social capital. Thus Fukuyama (1992) followed his proclamation of the 'end of history' and the triumph of the market over communist economies with an analysis of the shortcomings of economic analyses which omitted the importance of the 'social virtues' linked to trust for the creation of prosperity. Putnam's work (1993, 2000) on the role of civic traditions (social capital) in accounting for the economic success of regions in Northern Italy and later, his analysis of the decline of social capital in the United States generated an international interest in the importance of maintaining high levels of social capital in local communities. In this vein, the World Bank, for example, discovered that social capital had been the missing link in its market model of development.

There is now, of course an extensive literature on social capital; its various forms such as linking, bridging and bonding; and its uses and abuses in policy development (see Productivity

Commission 2003). Its influence on Commonwealth Government policy is apparent in the Stronger Families and Communities Strategy and at the state level in a variety of programs, such as the 'Neighbourhood Renewal' and other community capacity building initiatives of the Victorian Government (Wiseman 2006). Its positive uses in relation to transport are well illustrated in this book by Stanley and Stanley in Chapter 13, where they refer to the potential for public transport to connect isolated individuals and facilitate useful communication (for example, in relation to job opportunities) and generally strengthen the social and economic fabric of local communities.

A major limitation of the 'social capital' model as a way of thinking about transport and disadvantage is a tendency to exaggerate the wider, especially economic, benefits of building local, personal contacts between people. Critics typically construe the emphasis on community capacity building as code for smaller government (Mowbray 2004). As Wiseman writes, the next steps in this regard need to be ensuring that what are often necessary local community capacity strategies (some things must be done at a very local scale) are integrated with a wider strengthening of the 'universal' services such as schooling and hospitals which impact on the wellbeing of localities. More generally, evaluations of United Kingdom's neighbourhood strengthening programs emphasise that while they can complement they cannot substitute for policies directed at economic renewal (Lupton 2003).

SOCIAL EXCLUSION

The concept of social exclusion emerged as an alternative way of putting the social back into public policy in the 1990s. It was less about identifying the 'missing links' in economic policy and more about asserting social values lost in the ultra-individualism of the Thatcher period and about identifying the people and places left behind in what had been a market driven approach to economic reform. In this sense social exclusion sits squarely within a tradition of thinking about poverty and disadvantage which goes back in Britain to Booth and Rowntree (Lister 2004). In the 1970s this tradition had been developed in new ways by Peter Townsend (1979) whose work had focussed on the definition and measurement of the 'relative poverty' which had become characteristic of postwar Britain rather than the Dickensian extremes of the nineteenth century. With the Thatcher governments in power in the 1980s these ideas did not have high policy impact with researchers struggling to build any kind of anti-poverty agenda. Neoliberals said the official poverty line was no longer a useful measure and academic disputes about where to draw the income based poverty line tended to substitute for serious research and policy development aimed at addressing the new forms of poverty and disadvantage created by the economic and social restructuring of the previous decades (Alcock 1997).

For researchers on transport and disadvantage then, this approach represents what has become the new mainstream in terms of thinking about poverty in contemporary developed economies. It had developed in France in the 1980s and by 1989 the European Union had established an 'Observatory' to monitor social exclusion policies. In 2000 at the European Council of Lisbon, promoting social inclusion was added to the list of policy priorities including employment, growth and sustainability against which each member nation was now required to report its policy progress. A set of social exclusion indicators known as the Laaken indicators was adopted for this purpose (Room 2004). The framework has been reaffirmed at successive European Councils and

member countries are required to develop and report on action plans to promote social inclusion through a process known as the Open Method of Coordination. Upon taking office the Blair Government established the Social Exclusion Unit (SEU). The unit defined social exclusion as 'a shorthand label for what can happen when individuals or areas suffer from a combination of linked problems such as unemployment, poor skills, low incomes, poor housing, high crime environments, bad health and family breakdown'. Rather than chasing an income line as a proxy of poverty, it identified as social exclusion what few Britons would have disputed: 'rough sleeping', the 'worst estates' and 'teenage pregnancy'.

In this period the Australian Government did not foster this more expansive approach to tackling disadvantage in Australia. Partly for this reason, social exclusion has also been a slow developer among Australian research communities (see Bradshaw 2003; Saunders 2003, 2005); although less so in relation to housing (Arthurson and Jacobs 2004). It is likely however that this lag will soon be overcome and Australian poverty research be more aligned with the UK and EU mainstream. Peter Saunders (2005) is leading a major project looking at the applicability of social inclusion in the Australian context. The South Australian Government has its own Social Inclusion Unit and in the federal election year 2007, the deputy leader of the opposition Australian Labor Party (see Gillard 2007) has named 'social inclusion' as one of her shadow portfolios.

In this context it is worth drawing attention to the perceived strengths of the framework as away of thinking about disadvantage. Most writers (see Smyth et al. 2006; Marlier et al. 2007) would include the following points in any summary of the distinctive features of the new paradigm of disadvantage as it has evolved in Europe. Social exclusion:

- is addressed to ensuring that no citizens are 'left behind' as prosperity rises;
- assumes poverty is *relative* to a minimum acceptable way of life;
- reflects the idea that deprivation, while including financial dimension, is very much a *multi-dimensional* phenomenon
- takes account of wider *dynamics* affecting particular places and groups
- has a focus on *agency* whereby the government – while a major actor – is not the only actor; leading to new governance arrangements which involve a wider range of partners in a more people-centred, participatory regime.
- Assumes that while policies are grounded in citizen entitlements they will also facilitate active particpation

Of course, like any new policy concept which gains a wide popular currency it must be stamped 'use with care'. Critics usually point to ways in which the language of social exclusion can lend itself to a 'blaming the victim' approach; to a denigration of the importance of income entitlements; and to an assimilationist focus on imposing 'participation' and order on excluded groups rather than reforming the inequalities of the wider society which generate the exclusion. However it should be noted that successful policy language will always be loaded with a variety of ideological messages. Levitas (1998, 2005) famously unpacked these in relation to social exclusion in the United Kingdom as MUD, RED and SID. In the redistributionist discourse (RED), she found fairly traditional social democratic emphases on the equalities of citizenship and the need to re-distribute from rich to poor in order to end poverty. The Moral Underclass Discourse (MUD), she noted, was concentrated on supposed moral and behavioural failings as the causes of poverty.

The Social Integrationist Discourse (SID) she found to be most typical of New Labour. It posited paid work as the source of inclusion and made 'welfare to work' the centre piece of its social policy reforms. This capacity for differing values to be embedded in the social inclusion approach need not be perceived as a weakness. As we noted above talk about social policy and about poverty in particular has an irreducibly ethical dimension (Bessant et al. 2005).

In this book, from a US perspective, Rosenbloom identifies two key features of transport policy which distinguish it from most other social services. First it has a greater 'spatial dimension' and second it provides a 'vital link between education, training, employment, health, etc services and facilities and the users they target'. Clearly these features fit squarely within the social inclusion approach with its emphasis on place and the 'joined up' nature of social disadvantage requiring 'joined up' solutions. In Chapter 14, Stanley and Stanley detail the British use of the social exclusion framework in relation to transport and consider its application in the Australian case. They note the key elements identified in the British research: availability and accessibility, cost, links to safety and security as well as impacts on 'travel horizons'; and argue for a wider definition which picks up on issues of social capital and wider impacts on wellbeing.

In his review of the international and comparative analysis of social exclusion, Room 2004). picks up some of these points in his outline of a progressive social inclusion agenda which might be taken up by transport researchers. He suggests that studies of disadvantage and exclusion need to avoid generating what he calls the 'social arithmetic of misery' which arises when our research concentrates on piling up data on the misfortunes of individuals to the neglect of considering the impacts of the wider society on their opportunities. If we take the example of transport, Room would recommend studies which 'provide data on relative life chances and livelihood strategies across the whole social spectrum' so that policy will address the fact that the disadvantage of some is linked to the relative advantaging of others. He also urges that we monitor the ways in which 'collective assets and investments shape wellbeing at the individual level' so that in relation to transport, researchers would look at the presence or lack of local community resources as well as the community groups which can limit or enhance the capacities of individuals to take up life chances. Thirdly he recommends we have regard for the key institutions which affect the capacity of individuals to manage the risks of social exclusion. Without these wider research strategies, Room concludes, 'we will end up with supposed policy recommendations which are, however, ignorant of the structural and institutional context' … and end up in polices which offer hand outs to the 'casualties of urban-industrial society' rather than considering how the processes going on in society need to be modified to prevent casualties in the first place.

CAPABILITIES AND THE HUMAN CAPITAL AGENDA

If only because it has become mainstream in the United Kingdom and the European Union we can expect the social exclusion approach to have an increasing influence on Australian research into disadvantage. As noted above, that approach sits very much within the mainstream of traditional social policy poverty investigation. In the meantime a different approach to poverty analysis has been influential in Australia, one which derives not from social policy so much as development studies. In a parallel reaction to poverty measures which abbreviated the dimensions of disadvantage to a purely monetary measure the Nobel Prize winning economist, Amartya Sen,

has argued that poverty has less to do with the absence of income than with people's lack of capacity to choose and do what they want to be. In Australia, there have been various proposals to operationalise Sen's ideas with the aim of establishing the kinds of capabilities people need to be able to actualise in the key transitions across the life cycle (Scutella and Smyth 2005). Because of its focus on capability and background in development economics, this framework has the advantage of more directly linking social with economic concerns. For example, the concept of investing in people's capabilities fits well with the central concern of the Council of Australian Government's (COAG) to develop our 'human capital' in order to raise economic participation and productivity.

Like the social exclusion approach, Sen's work is very much about widening our understanding of disadvantage beyond narrowly conceived economic definitions and monetary measures (for discussion of Sen and Nussbaum, see Lister (2004). As Sen argues, two people might have the same wealth and income but if one has a physical disability then he\she cannot achieve the same things in their lives. A simple dollar measure is a poor proxy for what individuals can actually be and do. If we measure by capabilities, on the other hand, we have a principled rationale for giving some people more than others in order to overcome disadvantage.

As much discussed in the literature, Sen's framework remains very abstract creating a challenge to researchers wanting clear definitions to operationalise and measure. At the abstract level he thinks of 'capabilities' in terms of the different functioning vectors a person is able to achieve including having the realistic opportunities to exercise choice between lifestyles. The term functioning refers to the actual achievements of a person in doing or being what they value. Their wellbeing, in turn is considered in terms of their actually achieved 'beings and doings'. Sen refuses to deliver a list of capabilities and functionings leaving it to others to develop; notably, Nussbaum (2005). She considers the central capabilities in terms of life, bodily health, bodily integrity, senses, imagination and thought, emotions, practical reason, affiliation, other species, play, control over one's environment (political and material). Developing each of these capabilities into functionings is deemed equally important if the person is to 'flourish'.

While Nussbaum's schema remains rather abstract, the capabilities approach does offer a valuable reframing of issues surrounding the rightful entitlements of citizens. Politically speaking the argument for investment in people's ability to achieve their aspirations and contribute to the economic life of the nation allows a persuasive counter argument to the neoliberal claim that social spending simply encourages welfare dependency. It opens up a new, less ideological, social policy agenda which invites us to focus more empirically on the socio-economic factors that are inhibiting or enabling human development and therefore participation and productivity; factors such as education, health and mental health, housing and social care. As with the social exclusion approach it encourages us to discover how the life chances of citizens are over-determined by their social contexts and suggests ways in which equality of opportunity can be made effective.

The capabilities approach seems particularly well suited to thinking about transport in terms of social policy. On the one hand, thinking about transport rights in these terms is not so dissimilar to the social inclusion approach discussed above. As we noted there, a powerful case can be made in terms of combating transport disadvantage because of its vital role in facilitating people's functioning across a range of social and economic domains. On the other hand, the capabilities approach also brings to the fore the important economic benefits of fair and efficient transport systems. These are not an emphasis in the social exclusion approach, which is framed very much

in terms of a social entitlement (to a 'Fair Go'). The capabilities model couples the social entitlement argument with a claim that enabling good functioning is also a good economic investment. As Salais (2003) argues, the Sen approach allows us to reframe social policy in terms of a social investment in productive factors thus linking justice and efficiency.

CONCLUSION

This brief overview of transport and Australian social policy began by observing the absence of transport from traditional understandings of social policy. At the same time it was noted that economic policy in the period from the 1900s to the 1980s underwrote significant public economic investment in transport. Both the Australian Federation model of the 'Fair Go' and the Keynesian economic state produced an even spread of investment in transport which allowed Australian citizens a relatively standard access to transport services across the nation. Only with the rise of economic neoliberalism in the ensuing two decades did we find an exclusive emphasis on market provisioning of services restraining governments from acting in ways which would reduce transport disadvantage in the belief that market provisioning would ultimately be more efficient if not fairer.

The twenty first century has seen a receding of the neoliberal tide and new calls on governments to intervene in strategic ways in order to increase 'social capital', promote 'social inclusion' and to invest in people's capabilities. As this book shows, transport has come to the fore in each of these new social policy movements. It was proposed that some of this social policy renaissance has been fuelled by a sense that social cohesion has been compromised by too great an emphasis on market efficiency. Here transport is positioned in the classic welfare role of enabling those left behind to participate in the mainstream. In other arguments intervention is sought more on economic grounds. Markets are seen to be less efficient because of deficiencies in services such as education, health, housing and transport. In this approach, social rights are seen not to replace or stifle the market but rather to provide a framework for strategic management of markets in ways that result in better and fairer market transactions. In many ways transport is more obviously an economic service than most other social services. Perhaps it is this rediscovery of the potential economic benefits of social investment which is bringing transport to the fore in social policy?

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LESSONS FOR AUSTRALIA FROM THE US

AN AMERICAN LOOKS AT TRANSPORTATION AND SOCIAL EXCLUSION

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Although the term social exclusion is rarely used in the US, many of the issues that fall under that rubric have long been part of US policy debates in the transportation arena. This paper's goal is to critically evaluate US experiences to suggest to Australian policymakers the complex causes of different kinds of social exclusion and some potential policy solutions to address them. This paper first distinguishes seven types of social exclusion in the transportation area and then identifies five major causes. The paper next describes three major US approaches to a range of social exclusion issues in transportation (and other areas): the 1964 Civil Rights Act, Environmental Justice mandates, and the 1990 Americans with Disabilities Act. Each is interesting because it addresses different kinds of social exclusion in transportation with different policy instruments. The US experience illustrates how complex a phenomenon social exclusion is and demonstrates that continuing efforts to 'blame' transportation deficiencies for many other types of social exclusion over-simply what are very complicated processes. In fact, US experiences illustrate the many interests that may be in conflict in distributing scarce resources to address social exclusion, attest to the real difficulties in using transportation systems and services alone to address social exclusion, and suggest that transportation must be part of a package of policies and programs to have any real impact.

INTRODUCTION

Social exclusion, and its acronym, social inclusion, are umbrella terms that cover a number of topics and problems. Overall social inclusion is more encompassing and more flexible than other equity or social justice concepts on which public policy debates have concentrated in the past (Wilson 2006). While the precise term is not common in the US many US transportation debates focus on people unable to access needed services and facilities due to physical, mental, or other disabilities as well as those whose age, sex, cultural background, national origin, or spoken language create exclusionary barriers. In fact US policy focus has gone beyond a concern with groups deliberately excluded from access to governmental programs to those whose exclusion arises unintentionally.

SOCIAL EXCLUSION AND TRANSPORTATION

Social exclusion debates about transportation services and programs are both similar to, and very different than, those focused on other public and private services (Lucas 2004). They are fueled by public recognition of four different, but often overlapping, problems as well as two concerns more specific to transportation issues.

FOUR SIMILAR POLICY THEMES

There are four social exclusion issues common to transportation and other substantive programs in the US. First, as with other governmental activities some individuals or groups of individuals **fail to benefit** from transportation programs provided to the general public. People with disabilities may not be able to use public transport systems if the vehicles are not physically accessible;

people who do not drive do not benefit as much as those who do drive from highway expenditures or road improvements.

But even if they live in areas provided with transportation services or facilities, and even if those services are physically accessible, certain groups may not benefit in proportion to their needs (Rosenbloom and Altshuler 1979; Pucher 1982; Giuliano 2005). Moreover certain groups may be provided with inferior or inappropriate services. There is substantial evidence that many US transit operators have provided a different kind of service to those who are thought to be captive riders – that is, those with no alternative transportation options (Rosenbloom 1982, 1991). Because they can, public transit operators may not provide direct service from neighborhoods housing many captive riders to major employment or other destinations, requiring them to transfer while choice riders are offered direct services. Or operators may assign older vehicles or those with broken equipment (eg air conditioning) to disadvantaged neighborhoods (Oedel 1997; Mann 1997; Sanchez et al. 2003).

Second, a common policy concern is **financial burden** (Taylor 2000). It is the nature of public finance that people are often taxed or charged for services that they either do not use or would not voluntarily pay for (Mikesell 1999). So the social exclusion question is whether people are being asked to pay a fair amount for various transportation services. Unfortunately there are multiple definition of fairness since it is ultimately a value-laden, and thus political, question (Beatley 1988; Lucy 1988; Dill et al. 1999; Litman 2005; Levinson 2005).

What is considered a fair price (either in fees or taxes) may be based on very different metrics. Should users pay more than non-users? Should non-users pay at all? Should each user be asked to pay a proportional share of total service costs? Or should users be charged additional fees for creating increased costs for the system (for example, by traveling at a congested time or along congested routes)? Instead should be payment be based on the individual resources or needs of the travelers themselves (Netzer 2001; Kockelman and Kalmanje 2005)? Congestion and road pricing schemes, for example, have raised significant social exclusion questions because they tend to charge all users the same (unit) prices regardless of their individual incomes or needs (Bonsall and Kelly 2005).

If all transit fares are set at a flat rate, a common method in the US, travelers with short trips subsidise those making longer trips; this unfairly impacts the poor, because lower income riders tend to take shorter transit trips. Charging for transfers (ie from one bus to another or from a bus to a tram) also disadvantages poor (and particularly young) travelers since they tend to transfer more than wealthier (and older) travelers. Independent of trip length those traveling in dense areas with highly productive transit services (ie those with high ridership per unit of service) subsidise those living in low density areas with low productivity services – even if fares are distance based. Again, in the US context that generally means people with lower incomes are subsidising those with higher incomes (Guenthner and Jea 1985; Golob et al. 2006).

A third question common to social exclusion debates is who bears **the burden of negative externalities**. Transportation facilities may create noise, noxious fumes, safety, and personal security risks; people living near busy transport facilities may pay a serious price in terms of their health or quality of life whether or not they fund or use those facilities (Bronzaft 2003; Schweitzer and Valenzuela 2004; Lu and Morrell 2006). Studies show that those living in areas with high traffic volumes are more at risk for a variety of pedestrian–auto (and bus) crashes than are those living in suburban or rural areas (Rivera and Barber 1985; Abdalla et al. 1997; Scottish Executive

2001; Campos-Outcalt et al. 2003). Moreover those living in neighborhoods with high traffic volumes are more likely to suffer from asthma and other medical conditions because of exposure to higher levels of air pollutants (Edwards et al. 1994; Fanta 2002; Evans and Stecker 2004).

This issue has become a major social exclusion concern in the US because, in general, the burden of many transportation externalities is neither randomly nor equally distributed. Residential areas with serious transportation or other externalities (noise, congestion, air and other pollution, safety and security risks, etc) tend to be the home of lower income or otherwise marginalised populations (Bae 1997; Been and Gulta 1997; Weinberg 1998; Ringquist 1998: Bowen 2001; Gwynn and Thurston 2001; Schweitzer and Valenzuela 2004).

A fourth issue underlying an examination of social exclusion in most US government policies or programs is **participation or consultation**. Questions have been raised about the involvement of a variety of groups in the decisions made by government about the pricing, location, magnitude, and service characteristics of various transportation facilities (Khisty 2000). Are affected groups asked or allowed to participate in the planning process in which government decides where highways or public transport routes should go and how they should be financed (general taxes, user fees, etc)? If they are consulted does their participation actually impact decision-making (Sen and Azonobi 2004; Eagle and Stich 2005; Brach, 2005)?

DIFFERENT POLICY THEMES

There are two substantial differences between transportation and most other governmentally supplied or financed services. **First,** transport services have a greater spatial dimension than most other services (Fruin and Sriraj 2005); the degree of exclusion experienced by people is generally inversely proportional to their distance to/from transportation services (Kenyon et al. 2003). Ironically, the relationship between the burden of negative externalities and distance from facilities is usually the reverse – the closer a person lives to a transportation facility which creates noise or congestion, etc, the more s/he suffers from those externalities (Schweitzer and Valenzuela 2004).

Second, transportation is often seen by both transportation and non-transportation professionals as the vital link between education, training, employment, health, etc services and facilities and the users they target. The role of transportation in linking disadvantaged people to societal opportunities has achieved considerable prominence in both Europe and the US because of the growing emphasis on employment as a solution to social exclusion (Blumenberg and Manville 2004; Armstrong 2006).

While it is possible to make the argument that transportation is not the only service with such a clear linking characteristic – education surely has similar impacts – many analysts believe that the social exclusion experienced in non-transport programs is either caused by, or can be alleviated by, the transportation system (Kenyon et al. 2003; Lucas 2004). For some people this is the real social exclusion issue in transportation. However, this argument is – or should be – a contentious one since transportation may be a necessary but not both a necessary and sufficient solution for addressing these problems.

MAJOR US RESPONSES

This section describes three sets of US legislative or regulatory programs designed to address issues which clearly fall under the social exclusion umbrella in the transportation policy arena: the 1964 Civil Rights Act, the set of statutes and regulations which create Environmental Justice mandates, and the 1990 Americans with Disabilities Act. Each is important because it addresses different exclusionary elements in transportation policy and does so with different policy instruments.

THE US CIVIL RIGHTS ACT OF 1964

The leading US law posing social inclusion obligations in transportation is Title VI of the Civil Rights Act of 1964 which forbids discrimination based on race, color, or national origin. Passed just after the assassination of President Kennedy, the law was designed to address centuries of social exclusion in many government programs and particularly public transit service where discrimination was intentional and clear. Today, however, there is far more controversy over what this Act means since social exclusion may well happen in a number of ways that are not intentional.

Most transit systems legitimately make decisions that create benefits for some users but not for others, or, create disproportionate benefits for some system users compared to others. Ultimately Title XI has not been very helpful to individuals who allege that transit or highway or other transportation planning decisions have not created equal benefits for all users unless they can prove that minorities were specifically and unreasonably excluded from those benefits.

ENVIRONMENTAL JUSTICE

Environmental justice, like social exclusion, is a topical term whose meaning has shifted over time. US environmental justice advocates were initially concerned that the health and wellbeing of certain communities were disproportionately impacted by the negative environmental aspects of public or private locational decisions (United Church of Christ 1987; Lavalle and Coyle 1992; Been and Gulta 1997) especially when residents were from minority or disenfranchised populations (Collin et al. 1995; Burby and Strong 1997, Bowen 2001).

However over the last four decades US law and regulations have facilitated the expansion of the concept of environmental justice. Applied with Title VI of the Civil Rights Act, ironically itself not a powerful tool against unintentional social exclusion, this concept has become part of a package of statues and regulations which give minority and disenfranchised groups substantially more power over service and financing as well as locational decisions in transportation (and other) systems (Ward 2005).

A recent research report noted,

> To some, environmental justice is a social cause that promotes fairness and equity for all people. To others, it is a set of federal and state policies that must be followed to ensure agency compliance with federal civil rights laws, especially Title VI. Still others may view environmental justice as a possible roadblock to transportation planning and project development that must be overcome in situations when local activist groups use the planning process to promote a

> specific agenda. In reality, environmental justice involves each of these perspectives to a certain degree (NCHRP 2004, p. 2).

Case study research suggests that environmental justice requirements have indeed given community groups far more power at the bargaining table than they had previously (NCHRP 2004; Ward 2005).

THE 1990 AMERICANS WITH DISABILITIES ACT

In July of 1990, the Americans with Disabilities Act (ADA) was signed into law giving people with disabilities the same kind of rights the Civil Rights Act of 1964 earlier gave people of color. Title II of the Act specifically outlaws discrimination on the basis of disability in services, programs, and activities provided by public entities, including local highway and transit programs.

If a public transit service – from fixed route buses to inter-city rail – is owned or operated by a public entity it must be readily accessible and usable by individuals with disabilities including those who use wheelchairs. Public transit operators are required to buy only accessible buses. Older systems with rapid rail and light rail services are also required to make some or all of their vehicles, stations, and transfer points fully accessible; new systems must generally be fully accessible.

Public transit systems must also provide complementary paratransit – that is, special demand responsive services – for people who are unable to access a bus or who do not have an accessible path to an accessible bus (there are no such requirements for any rail components of the system). Transit operators must provide complementary paratransit services to eligible users in at least a 3/4 mile corridor paralleling their existing bus routes and during at least the same hours of service that those bus routes operate. Users may only be charged a fare equivalent to double the regular bus fare. Users may not be required to request these services more than the night before service (although they may be allowed to call as much as a week in advance) and there can be no restriction on the type of trip they take. Most importantly eligible travelers effectively cannot be refused service – that is, systems are not allowed to have capacity constraints.

The ADA has certainly addressed some of the social exclusion previously faced by people with disabilities. But many people with disabilities still cannot use conventional public transit. Improvements in the US, as elsewhere in the world (Aurbach 2001; de Boer 2004), have been most visible and rapid in bus systems and the slowest in rail and tram systems, particularly older systems. But there are still substantial problems with bus services, perhaps even more with paratransit services, and certainly with pedestrian facilities (Rosenbloom 2005, 2007 forthcoming). In spite of the goals of the ADA, a substantial number of people with limited mobility are still unable to receive the kind of transportation services they need to fully participate in their communities.

SUMMARY AND CONCLUSIONS

These discussion show that social exclusion in transportation, as in many other governmental services, can arise because some groups do not benefit from a range of publicly provided programs, pay an unfair price for the services they do receive, are unintentionally harmed by otherwise appropriate public or private actions, and/or are excluded from the planning processes in which

important transportation decisions are made. In addition social exclusion can arise in the planning, financing, delivery, and operation of transportation services because transportation exhibits two more singular traits: 1) it is a spatially based service so that those who live or travel further from transport facilities receive less service than those who live or travel closer to those facilities, and 2) transportation is integrally linked to the successful use of other, non-transport, services.

Overall it is clear that these US laws or policies designed to address social exclusion in transportation are still struggling to achieve their goals because many issues ultimately involve debates about scare resources and interests in conflict, while new questions arise as old ones are settled. These analyses suggest that social exclusion debates must explore the underlying conditions which create social exclusion for different groups, frankly recognise the inherent conflicts in making judgments about distributing limited resources between and among groups of people, and provide insight on what can be intractable differences that may set apart certain groups in negative ways. The value of such critical discussions lies in their ability to help us untangle the often complicated factors indicted in social exclusion so we can develop effective policies and programs to address these problems.

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TRANSPORT DISADVANTAGE AND SOCIAL EXCLUSION IN THE UK

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The interplay between social exclusion and transport disadvantage is complex. This chapter explores these linkages and how transport policy in the UK has sought to address transport disadvantage. Following a discussion of the patterns of transport disadvantage in the UK, the chapter identifies key areas of transport policy that have been used to address the problem of poor access to transport.

Social exclusion reflects the existence of barriers which make it difficult or impossible for people to participate fully in society (Social Exclusion Unit 1998). Studies have identified a number of factors that are seen to contribute to social exclusion including differentials in education and training opportunity and attainment, socio-economic circumstances, local environment as well as access to information and physical accessibility to a wide range of opportunities including employment, shopping and recreation. Access to an adequate transport system is central to all of these. In the UK the focus of the debate has been concerned with the gap between poor neighbourhoods and the 'rest' where social and economic changes have resulted in mass joblessness, as a consequence of the decline of manufacturing industry and the need for new skills; concentration of vulnerable people in deprived neighbourhoods; family breakdown; poor core public services and public service failure; and the declining popularity of social housing. The problem in these areas has been compounded by a lack of attention to links between poor neighbourhoods and local and regional economies, and poor links between planning and economic development which can accentuate the barriers to work, education and child care (Social Exclusion Unit 2001; 2003).

Recent studies have highlighted the significance of the links between transport and social exclusion (Hine and Mitchell 2001; Lucas et al. 2001; DETR 2000). This work has presented evidence on the important role that public transport access can play in ameliorating aspects of social exclusion for non-car owning households. Work has also highlighted what happens when public transport fails to deliver an adequate service for these lower income and excluded groups. This situation is not helped by the traditional focus of transport policy on the consequences of car dependence. Land use policy has also created circumstances where new developments are now often located at peripheral or out of town locations, despite a tightening of the planning guidance on the location of new development. This new guidance places an emphasis on locations that are well served by public transport and accessible on foot and by bicycle.

UK TRANSPORT AND SOCIAL EXCLUSION CONTEXT

Transport is important in determining the levels of access, of households and individuals, to goods and services and therefore in promoting social justice. It is also clear however that transport policy, practice and provision is not an egalitarian domain and that it reflects socio-spatial patterns. Transport is also rarely an end in itself, it is about co-presence – intense social obligations and patterns that make transport necessary (Urry 2002). In terms of these patterns there are a number of groups in society that have been disadvantaged by existing forms of transport provision. Those

most likely to experience transport disadvantage are those on low incomes, women, elderly and disabled people and children (Hine and Mitchell 2003; DETR 2000). Evidence also indicates clearly that multiply deprived households are highly inter-correlated with other factors such as low incomes, low levels of car ownership, public sector housing. Essentially these groups are those with traditionally lower levels of access to cars and this is at a period in time when the car is not only the dominant mode for all journeys over one mile but also plays a significant role in journeys under one mile as well in the UK.

The UK National Travel Survey shows that over the period 1989/91 to 2004 although the number of households in the lowest real income quintile with no car has declined by 20 per cent, a substantial proportion in this income group have no car – 54 per cent in 2004 (Table 1). This is despite evidence from the National Travel Survey for Great Britain indicates that availability of bus services has changed little over this period in urban areas and has actually increased in rural areas.[1] Low income families are moving into car ownership as a response to rising public transport fares and poorer levels of public transport accessibility to different labour and housing markets increasingly in peripheral locations.

	1989/91			2004		
	None	One	Two or more	None	One	Two or more
Lowest real income quintile	73	24	3	54	38	7
Second quintile	48	44	8	37	47	15
Third quintile	25	55	20	20	52	28
Fourth quintile	12	55	33	11	46	43
Highest real income quintile	7	46	47	8	40	52

Table 1 Household Car ownership (per cent) by income band, 1989/91 and 2004
Source: Department for Transport (2005) National Travel Survey

In the UK people from households on low incomes make fewer journeys overall but about twice as many journeys on foot and three times as many journeys by bus as those households in the two highest income deciles (Grayling 2001; Hine and Mitchell 2003). Higher income groups make more journeys by car and tend to travel further. Walking also remains the dominant mode of transport for people from households on low incomes, but in particular for non-car owning households in the lowest income quintile. Income level can impact on access times to goods and services, with lower income groups experiencing greater access times for hospitals often located at peripheral locations (Figure 1). Race and ethnicity can also be an important indicator of transport access and social disadvantage (Raje et al. 2004; Lucas 2004). This work has shown marked differences in car access across different racial and ethnic groups. In the UK black and mixed ethnic origins are less likely to drive to work (Wu and Hine 2002; Lucas 2004).

People living in households without cars used public transport for 25 per cent of their journeys and compared to households with cars this difference in use was as much as seven times greater for those households without cars. Taxi use and minicab usage are also higher amongst non-car owning households. Public transport tends to be used less by those in higher income groups. Women also experience exclusion in a number of ways as a result of poor public transport services

(Grieco et al. 1989). Hamilton et al. (2000) point out, there are clear issues affecting women's transport which relate to patterns of travel, patterns of employment, income, caring responsibilities and access to forms of travel (particularly access to cars). There are also differences amongst women in terms of the experiences of specific groups (e.g. older women, disabled women, women from ethnic minorities, women living in rural areas and lone parents). As with older people and the disabled the design of the infrastructure can mitigate against the use of a local transport system. Women with young children are perhaps hardest 'hit' in this respect. Personal safety when using or trying to access transport infrastructure is also a major consideration for this group.

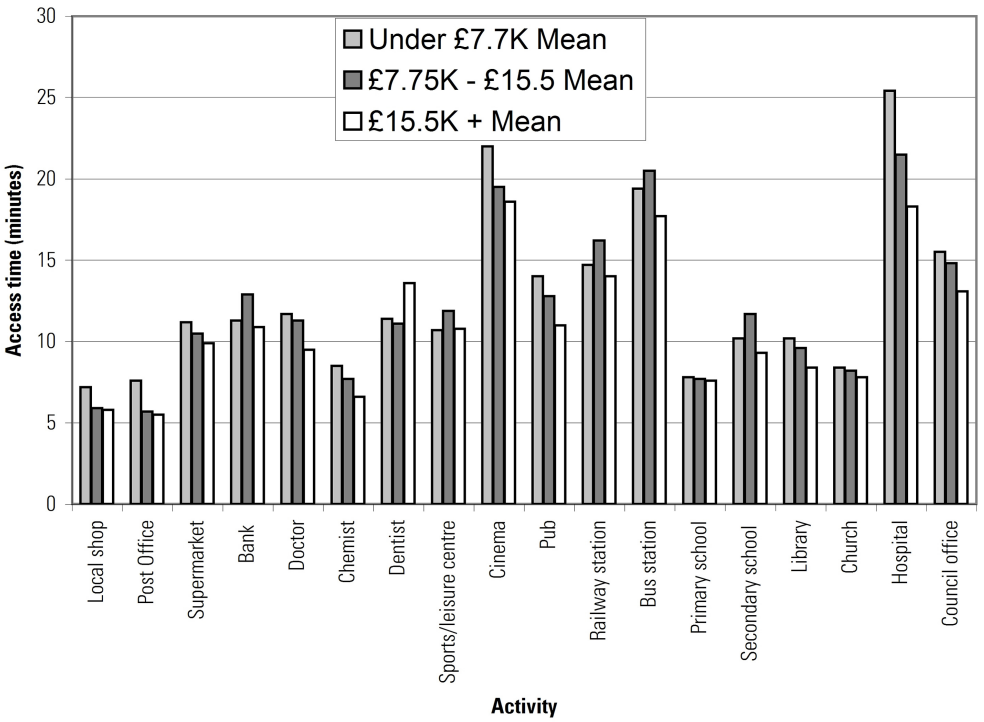

Figure 1 Access time and income level (Hine and Mitchell, 2001; 2003)

Disabled people are a group that also feature in discussions surrounding the link between transport and social exclusion (Hine and Mitchell 2001; DETR 2000). They suffer because for a variety of reasons they find it difficult to access public services. These reasons include: low incomes, physical layout of infrastructure and design of vehicles, location of stops (Oxley and Benwell 1985). The restructuring of bus services to the edges of residential and commercial areas on main transport corridors could potentially have a profound effect on this group. There is however little evidence to suggest the extent and nature of these impacts.

RESEARCH LINKING TRANSPORT AND SOCIAL EXCLUSION

The debate about social exclusion has origins in earlier debates in the literature on poverty, deprivation and the underclass. Social exclusion has come to be accepted as a term that refers to the loss of 'ability (by people or households) to both literally and metaphorically connect with many of the jobs, services and facilities that they need to participate fully in society' (Church and Frost 1999, p3). In transport terms the argument can be made that a lack of access to effective transport can impact on the extent to which individuals can access health facilities, local job markets and leisure activities. Despite no common definition of social exclusion there is also no common definition of the dimensions and factors involved in it. But in both cases, the approaches taken by various authors, though different in detail, broadly overlap (Hine and Mitchell 2003; Burchardt et al. 1999). Burchardt et al. also recognised that the ability of a group or individual to participate across these dimensions could be affected by a number of factors. These include the individual's own characteristics, life events, characteristics of the area resided in and social, civil and political institutions of society. Church et al. (2001) identified categories of exclusion that are connected to transport and proposed three types of processes that influence this relationship between exclusion and transport. They were: (1) the nature of time-space organisation in households; (2) the nature of the transport system and (3) the nature of time-space organisation of the facilities and opportunities individuals are seeking to access. The nature of these will differ according to gender, age, cultural background, level of ability and economic circumstances. The seven categories of exclusion suggested by Church et al. (2001) connected to transport are:

- physical exclusion – where physical barriers inhibit the accessibility of services which could be experienced by mothers with children, elderly or frail, those encumbered by heavy loads or those who do not speak the dominant language of the society;
- geographical exclusion – where poor transport provision and resulting inaccessibility can create exclusion not just in rural areas but also in areas on the urban fringe;
- exclusion from facilities – the distance of facilities (e.g. shopping, health, leisure, education) from people's homes, especially from those with no car, make access difficult;
- economic exclusion – the high monetary or temporal costs of travel can prevent or limit access to facilities or jobs and thus income)
- time-based exclusion (refers to situation where other demands on time such as caring restrict the time available for travel;
- fear-based exclusion – where worry, fear and even terror influence how public spaces and public transport are used, particularly by women, children and the elderly; and
- space exclusion – where security and space management strategies can discourage socially excluded individuals from using public transport spaces.

These categories of exclusion are important because they illustrate the role that access to transport plays in determining lifestyle. Indeed the idea of introducing dimensional frameworks to the debate on the links between transport and social exclusion highlights the need for approaches that can identify this range of experience.

EXPLORING DIMENSIONS OF TRANSPORT DISADVANTAGE

BARRIERS TO EMPLOYMENT

A number of studies in the UK have highlighted the effect that poor access to transport has on employment opportunities (Hine and Mitchell 2001; Audit Commission 1999). Cost and availability of childcare, lack of knowledge of the local job market and an unwillingness to travel outside the locality can also be barriers to employment. Many studies have also been undertaken that examine the variety of barriers to employment including job search behaviour and the structure of local economies. Work has also suggested that on the disadvantaged housing estates the economic reality is sharply defined by the resource constraints of childcare, travel to work time, cost and availability. Particularly when confronted by low wages and an increasing proportion of part-time work, travel to work costs may make taking a low income job an uneconomic option (McGregor et al. 1998). A number of studies have also focused on the links between access to transport and employment in rural areas. Rugg and Jones (1999) in a study of sixty young people growing up in rural parts of North Yorkshire found that most of the young people needed their own transport to hold down work, while public transport was seen to be unreliable and the timetable did not match up with work schedules. Similar findings have been found by a number of other studies in the UK (Monk et al. 1999; Stafford et al. 1999).

EXCLUSION FROM SERVICES

Recent work for UK government by the Social Exclusion Unit found that transport and individual mobility was mentioned to some degree by many of their policy action teams as a reason why problems were experienced by poorer communities (Social Exclusion Unit 2001; 2003). Lack of readily available transport, whether car or public of transport has a clear impact on whether particular goods and services can be accessed. In the case of public transport the problem, especially for communities with low levels of car ownership, is that services are more likely to be located on transport corridors. This when combined with timetables that do not accommodate new forms of employment (e.g. shift work) means that access can be problematic and that temporal barriers to job markets have been created (Hine and Scott 2001). Work by Leyshon and Thrift (1995) highlighted the difficulties experienced by those living in disadvantaged areas in terms of their ability to access financial services. Young (1999) has highlighted the difficulties in accessing health care facilities for women in low income groups due to low levels of car ownership and reliance on public transport. Lack of transport and the cost of public transport have been cited as a significant barrier to further education (Callender 1999).

FEAR AND PERCEPTIONS OF SAFETY

Perceptions of safety and fear can have significant effects on levels of personal mobility. In the UK older people, women and those from ethnic communities are more likely to fear crime whilst using public transport. For younger people anxieties experienced when using public transport are similar to those for adults. Young women feel very unsafe after dark when using public transport. Other research has found that people feel markedly safer when walking around their neighbourhood during the day compared to after dark. Women feel less safe than men and are more worried about being a victim of street crime (Crime Concern 1999). Research has also identified a fear of interchange facilities and stations in the dark and at off-peak periods, and

the need for a security presence in these locations (Hine and Scott, 2001). The consequence of this fear is that trips are either not made or that alternative arrangements are made where it is possible to avoid these situations. Other studies has found that taxis can play a very important role in these circumstances (Pain 1997; Hine and Mitchell 2001).

IMPLICATIONS FOR FUTURE TRANSPORT POLICY

Increasingly local services and activities are located in inaccessible places for non-car owners, new sites for employment and housing are also located on the edge of towns and cities. Public transport networks often do not adequately serve these out of town/edge of town locations. In many towns and cities during the off-peak (early morning and late evening) buses can be a rare commodity. In rural areas access to bus services is also limited – 29 per cent of rural areas in Great Britain were found to have no services at all (Social Exclusion Unit 2003). Typically, social exclusion and its reduction through improved public transport are treated as a general policy aim at local government level. This may reflect a lack of control over public transport operators, following deregulation, with regard to the price and quantity of public transport; however, policies are in place for concessionary travel and the buying in of socially necessary public transport services. In the UK, with the passing of the Transport Act 2000 (Transport Act 2001 in Scotland) there has also been some implementation of Quality Partnership arrangements aimed at increasing frequencies on key urban corridors and improving related infrastructure (Davidson and Knowles 2006). At the time of writing no Quality Contracts have been introduced under this legislation. This allows local transport authorities to effectively suspend deregulation on a selected route/area, where it is in the interests of the local community, and offer socially necessary services on a contractual basis. Traditionally policy interventions for the transport disadvantaged in this area have emerged from the specialist transport provider who has sought to address those gaps in provision not filled by main stream transport providers. Also other interventions have resulted from the need to introduce concessionary travel for older and disabled people and the growth of guidance and legislation on these matters.

BUS POLICIES

Public transport network coverage is a key public policy issue. The UK's commercialisation of local bus services, seen as essential by operators for future business growth, has resulted in the development of 'Metro' type urban bus routes or high frequency corridors in many town and cities. In rural areas the focus has often moved to the provision of fewer higher frequency or limited service routes. In these situations the emphasis is not on route subsidy from public funds (even though operators may be in receipt of the Fuel Duty Rebate or as it is now known the Bus Service Operators Grant), although where operators control a large part of the network there are examples of cross-subsidy between routes (Hine and Mitchell 2003). A consequence of the trend towards high frequency corridors in urban areas has been a movement away from the provision of socially necessary services especially in the off-peak. These are often in or adjacent to areas with high proportions of public-sector housing.

In rural areas network shrinkage has been endemic partly in response to higher levels of car ownership in these areas but also due to cost cutting measures associated with a reduction in revenue support for public transport. In England this has been despite increased funding of rural

public transport through the Rural Bus Subsidy Grant and the Rural Bus Challenge. Evidence suggests that local authorities are choosing to spend this revenue support funding on other areas such as education. Within these schemes local authorities have discretion over which services to support. Under this scheme a relatively small number of schemes have proven expensive in terms of cost per mile and per passenger, and have subsequently been withdrawn. The Rural Bus Challenge (RBC) scheme has encouraged innovation particularly with regard to the development of demand responsive systems and computerised booking. In terms of the impact on community transport operators it has been clear that consultation between local authorities and community transport operators has increased and that there has been a fostering of community transport through the joint use of computerised booking systems. There is also evidence that in these RBC schemes there has been sharing of vehicles with community transport schemes, these arrangements not only maximise vehicle usage but also provide additional revenue for the overall RBC scheme (Department for Transport 2003).

An established method of improving access to bus services is through a general or targeted subsidy. The 1985 Transport Act, which deregulated bus services in Great Britain, heralded the end of low fares policies, in other words passenger transport authorities and local authorities could no longer subsidise bus services except those that were deemed to be socially necessary and unprofitable. More recently, there has been some movement on this under the Transport Act 2000 (2001 in Scotland) where quality contracts allow local transport authorities to set fares within a franchise. Such interventions that produce a general fare subsidy are a positive step for low income groups. Until recently there has been limited evidence to suggest the benefits of this approach for low income groups. Targeted subsidies is another approach that is used to grant concessionary travel to pensioners, the disabled, children under 16 and students aged up to 18 years in full time education. Research indicates that these schemes encourage travel – those with concessions travel more often and further (O'Reilly 1990; Bonsall and Dunkerley 1997). Nonetheless, it is possible for other groups to be included in a concessionary scheme on a voluntary basis.

Improving the accessibility of services is another aspect of bus policy. The Disability Discrimination Act 1995, which legislates for mainstream public transport to become accessible to the disabled and wheelchair users, when combined with local transport strategies and quality partnerships will ensure a fleet of accessible vehicles. The adaptation of street infrastructure, including bus boarders and raised platforms, upgrading of bus shelters, and the enforcement of parking in bus lanes and around bus stops, is also an important component of this approach.

SPECIALIST SERVICES

Specialist services are typically provided by the voluntary sector. These services typically consist of: group hire bus services; dial a ride services and voluntary car schemes. The objectives of dial a ride services were originally to provide a demand responsive service serving low density suburban areas. As a concept they have been around in the UK since the early 1970s. Initial experiments with this form of transport found that the services were expensive and failed to cater for dispersed trip patterns (DETR 1999). Despite this the approach remains an accepted method of delivering services to the elderly and disabled a section of the population where transport needs can be expensive. The efficiency of dial a ride systems has been improved by computerised scheduling packages that in effect provide the operator of services with a reservation system for services. A

variety of dial a ride services are now offered by community transport operators (Social Exclusion Unit 2003). Ling and Mannion (1995) in an evaluation of dial a ride in the North East of England revealed that schemes can improve the quality of life positively for older people across six dimensions: independence, loneliness, morale and life satisfaction, health and absence of pain, financial welfare and activity participation. Hine and Mitchell (2001; 2003) found little or no work, which has explored the specific contribution of needs based transport initiatives to weakening exclusion mechanisms and assessing their impact on time-space organisation of individuals, households and facilities. Analysis of the effects of these schemes tend to be in terms of attractiveness to passengers and operational monitoring of such schemes.

TAXIS

Taxis are the most flexible transport service (Beuret 1994) and are a popular alternative to other modes of transport even though they are the most expensive form of transport in the UK. On average taxis are five to seven times more expensive than other modes per passenger mile. To combat the high cost taxi card schemes exist as a subsidy for travel by this mode. Two forms of taxi operation have developed. Essentially there are those taxis that are run through voluntary driver schemes and taxis operated by commercial firms. Voluntary car schemes have been concerned with transporting people for social services, health and education purposes, however this role has expanded to shopping and leisure based trips. These schemes have been effective although funding and volunteer resources do dictate their availability, which is restricted according to specific eligibility criteria (DETR 1999). Beuret (1994) outlined a number of shortcomings with taxis including problems accessing vehicles for those with disabilities and wheel chairs, although a number of companies are pioneering wheelchair accessible vehicles. Also that those groups in the population that tend to use taxis the most also tend to be on lower incomes, although there has been a growth in their usage by the general population for leisure purposes.

CONCLUSION

The role transport plays in reinforcing patterns of social disadvantage and exclusion is undeniable. Access to transport, now promoted through the integration of transport and land use, is central to the idea of achieving reductions in transport disadvantage experienced by particular groups in society. It is clear that debates about social exclusion in public policy have added considerable weight to the concept. Trends in transport use and the operation of bus networks however seem to downplay the importance of accessibility to goods and services for the transport disadvantaged, instead policy favouring mode shift objectives can often obscure the basic needs function of public transport.

In the UK transport policy has sought to address the issue of transport disadvantage through the introduction of policies aimed at improving public transport services through subsidy and new schemes. Increasingly linkages are developing between providers of specialist demand responsive services and mainstream public transport operators. Land use policy has also been used to ensure that new developments are located at more suitable locations for public transport. In addition transport investment decisions are appraised using new assessment frameworks and impact assessments. Despite this growing awareness of the problems faced by the transport disadvantaged there are key issues associated with the governance of public transport in a deregulated

framework and how delivery of public transport services can be improved outside London. Future challenges not only rest in the area of governance but also in long term changes in the structure of the population which will consist of more elderly people with transport needs and a growing group of geographically concentrated low income households that experience enduring poverty.

ENDNOTES

1 In the National Travel Survey this is measured as households within a 13 minute walk of an hourly bus service.

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SOCIAL EXCLUSION

INFORMED REALITY THINKING ON ACCESSIBILITY AND MOBILITY IN AN AGEING POPULATION

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This chapter explores mobility in the context of an ageing society. It emphasises that the car is the dominant form of transport for seniors in Australia and that it will always be likely to remain so. Hence planning for a car based future for seniors is a major policy aim. Nevertheless all transport systems will need to be adjusted to meet the needs of an ageing society and many of these needs are described.

INTRODUCTION

Ageing populations are being increasingly recognised as a major social issue that must be given increasing attention from government in particular. The inevitability of rapid growth in the elderly population is primarily due to a decline in fertility rates and an increase in life expectancy (Figure 1), the latter linked to some extent (and the former to a lesser extent) to wellbeing and prosperity.

Accompanying the ageing process is a migration, in Australia, out of the larger metropolitan areas and towards regional coastal centres, typically to the north where the climate is more appealing, although support facilities, such as public transport, are in general less than in the big cities. Figures 2 and 3 illustrate this most vividly for NSW.

An ageing population brings many challenges, of which one is encouraging lifelong mobility. The OECD argues that 'governments can enhance old people's independence and quality of life, while benefiting from lower public health and program costs.' This is all about delivering vitality in life, which is the underlying objective of wellbeing. A sense of fulfillment indicates the vitality of elderly people: In Japanese, for example, vitality is understood to be the keenness one feels about one's daily life, or the extent to which one feels life is worth living (Ieda and Muraki 2005). Improving mobility will improve the vitality of elderly people by increasing the frequency of their outings. A public policy of ensuring a minimum level of mobility should be promoted by developing transport policies that improve the vitality of all people in society. It is typically assumed that transport for the elderly means public transport, but we should think of seniors' use of their own cars not as something that is simply inevitable, but as a new trend that offers a number of advantages.

If we are to ensure that social disadvantage does not result from ageing then it is absolutely essential to recognise that the ability to get out and about is a major factor driving the social exclusion aspect of disadvantage. In a society such as Australia, this is strongly linked to the ability to drive a car and what support mechanisms are in place when an elderly person can no longer drive. It is unlikely that conventional public transport can fill this gap, given the cost of improving services and also the necessity for door-to-door accessibility in many suburban settings where footpaths are inadequate and dangerous and where the geography involves challenging walking to public transport.

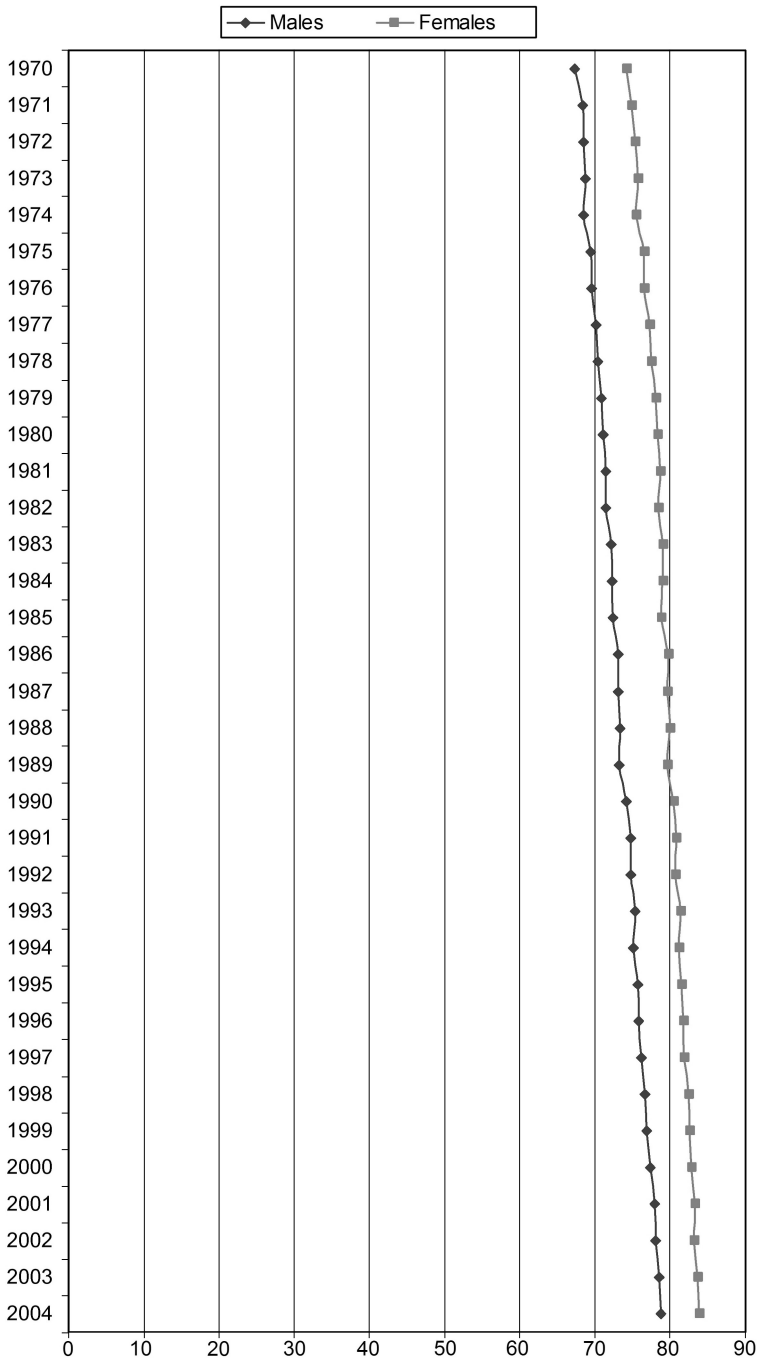

Figure 1 Life Expectancy at Birth in Australia
Source: Australian Bureau of Statistics (2005)

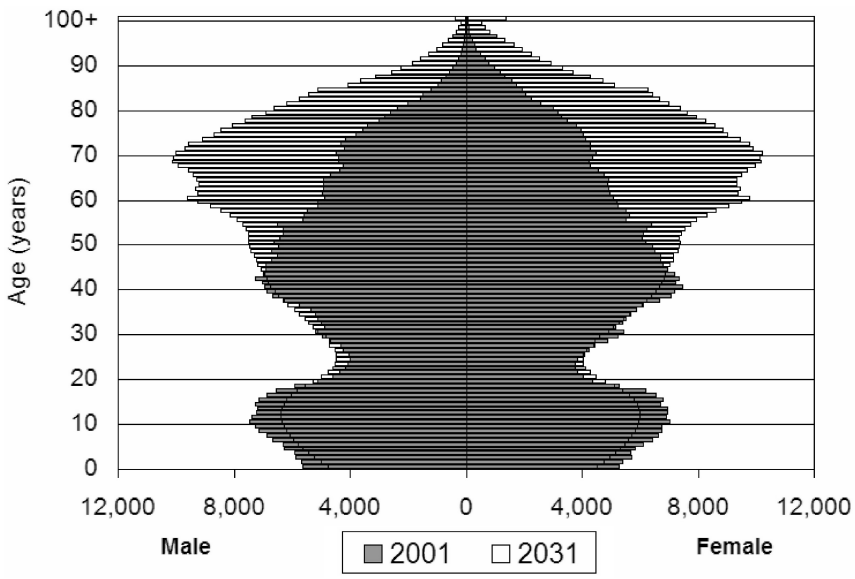

Figure 2 Age and Gender Profiles in 2001 and 2031 for Coastal NSW
Source: Department of Planning (2005)

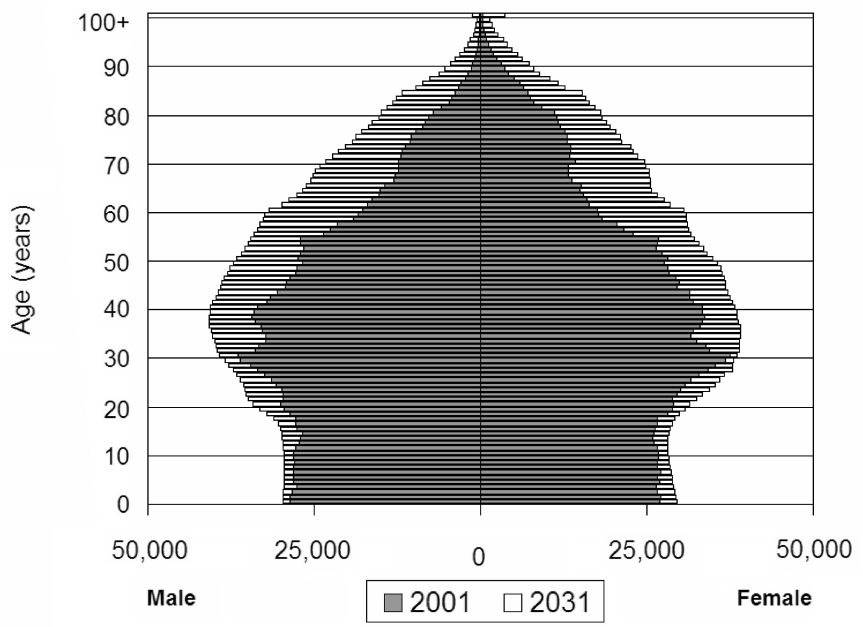

Figure 3 Age and Gender Profiles in 2001 and 2031 in Sydney
Source: Department of Planning (2005)

Elderly individuals in future generations will increasingly be active as they will have, on average, greater financial strength ('cashed up') but are likely to relatively time poor, given the

ability to do a lot more. The myth that such a cohort will have fewer mobility needs than the rest of the population is nonsense. They are however likely to have unique transportation needs; for example they may require more trips to the doctor and for other forms of medical attention which add to the number of trips they make. The reality is that the transportation needs of the elderly are just as significant as those required of younger, non-retired populations. Add to that the increased need for transportation options for those whose age or physical condition make it impossible for them to take advantage of traditional forms of public transportation, and the transportation issues facing the elderly take on even greater significance. Just getting out and about is of immense benefit.

By and large, the population will age substantially but differ from the elderly of today in certain respects. The elderly will have experienced social change and will be used to claiming their rights, which will foster a more participative form of democracy. Those among the elderly who are not wholly reliant on state pension schemes will enjoy relatively high incomes. They will be car users (drivers or passengers) in the main. A high and increasing proportion of women too will hold driving licences, which is not always the case today. There is no point in extrapolating from current trends, because future developments will be on a new scale

Furthermore, the next generation is likely to exercise its political muscle a lot more than current and previous generations of the elderly. Watch the Grey/Silver white Power Space. A recent USA Proclamation of ensuring transportation options for older Americans emerged as one of the top three issues (out of 73) considered by delegates at the 2005 fifth White House Conference on Ageing in Washington. This chapter presents a number of perspectives on mobility and accessibility that need careful attention if we are to support the elderly in their quest to avoid social exclusion.

LINKS TO TRAVEL ACTIVITY

Greater car dependency amongst older persons is evident in all Western societies (Gantz 2002; Rosenbloom 2001; Donaghy et al. 2004; Tacken 1998). In addition, older drivers are the fastest growing segment of the driving population, in terms of license rates and distances travelled (Okola and Walton 2003; Rosenbloom 2001; Banister and Bowling 2004). Young seniors,[1] those aged 65 to 74 years, are travelling longer distances, are making more trips and the purposes of these trips are now more varied (Banister and Bowling 2004; Rosenbloom 2001; Rosenbloom and Morris 1998; Burkhardt et al. 1998; Hu and Young 1999; Tacken 1998). Commuter trips, once made by public transport, are now non-work trips made by the automobile (Rosenbloom 2001). The major relationship between age and mode usage is the rate of car driver trip chains, which peaks in the 40–44 age category for Sydney are shown in Figure 4.

The rapid decline in car driver trip chains as individuals age beyond the 40–44 age group results in a substantial increase in the proportion on non-car driving trip chains. For most elderly travellers, driving however is still popular; 36.4 per cent of persons aged 85 and older drive, while 45.5 per cent travel as car passengers, and 18.2 per cent travel by public transport. Both car passenger and public transport mode split increase with age at an increasing rate (but a small absolute increase as per Figure 4) from their minimums at age 40–44. These results are almost identical for weekdays versus the entire week.

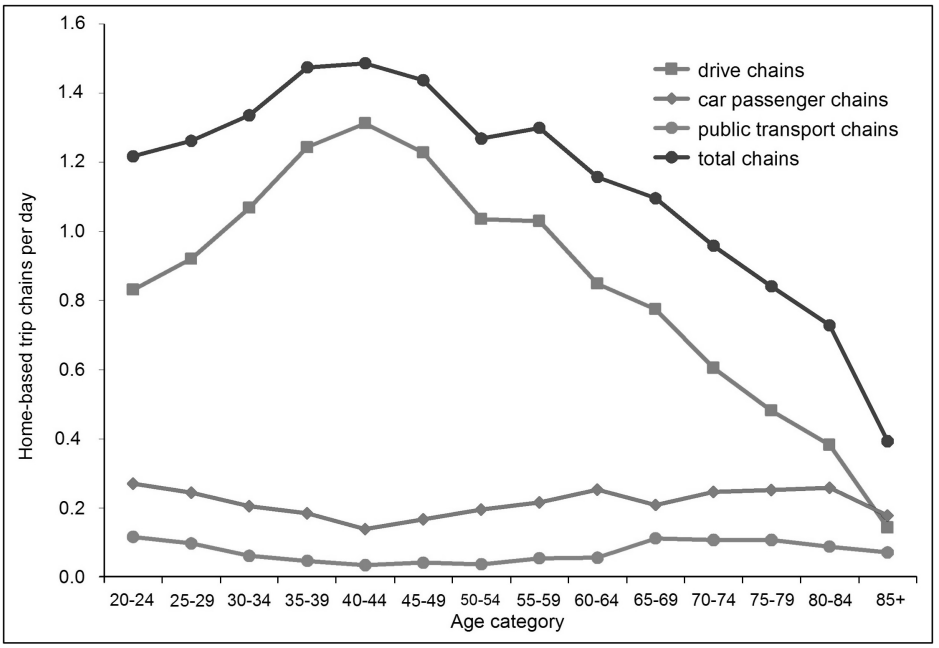

Figure 4 Average home-based trip chains per day by age and mode

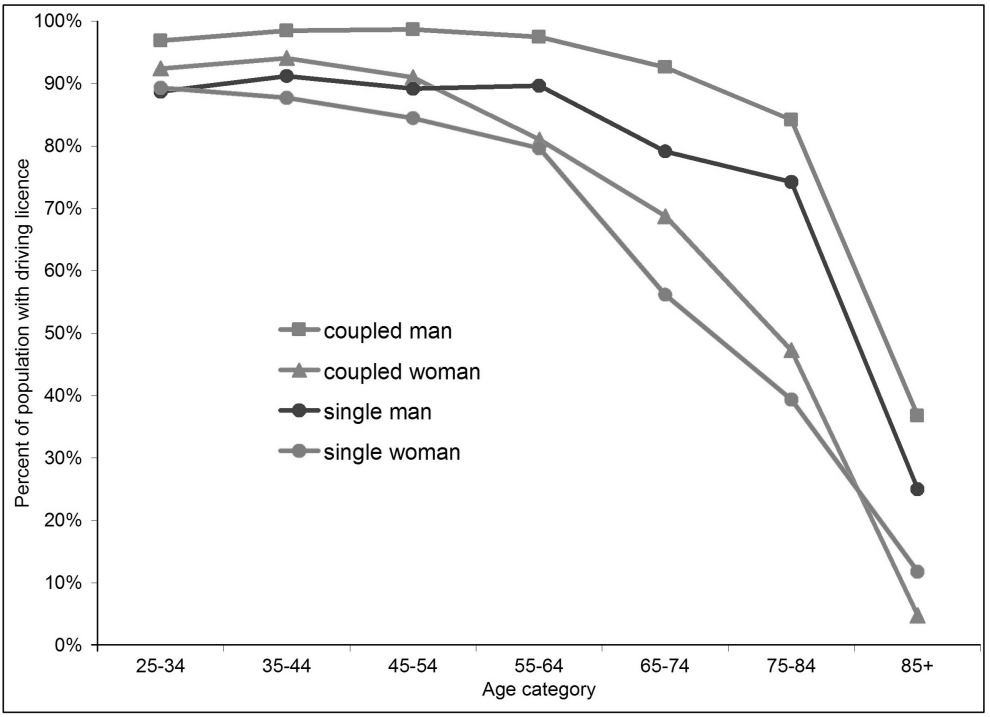

Figure 5 License holding by age, gender and living circumstance

These relationships raise the question of how driving license holding is related to age and the role that the ability to drive a car has on the switch to car as a passenger or to public transport. As shown in Figure 5, also for Sydney, license holding for women begins falling off at about age 50, whilst license holding for men falls off dramatically beyond age 79. Currently, of the individuals over 84 who have to undertake a mandatory driving examination in New South Wales if they wish to renew their licence, over 65 percent of females and 71 percent of males passed this examination in 2004 (Table 1).[2] It is not known how these pass rates will change in the future, as more people enter this stage in their lives, although we might expect a higher absolute number retaining their driving license. However, currently people aged 85 years and over with a driver's license only represented 16 percent of the total population in this age group (RTA 2004).

			Percent Fail	Percent Pass	Total
Female	Age Groups	55-59	70.30	29.70	596
		60-64	67.80	32.20	205
		65-69	70.99	29.01	131
		70-74	74.12	25.88	85
		75-79	72.31	27.69	65
		80-84	68.89	31.11	135
		85-89	*34.97*	*65.03*	*6520*
		90 +	*29.80*	*70.20*	*933*
	Total		**39.35**	**60.65**	**8670**
Male	Age Groups	55-59	52.29	47.71	765
		60-64	60.35	39.65	396
		65-69	69.39	30.61	245
		70-74	67.57	32.43	185
		75-79	65.95	34.05	185
		80-84	62.62	37.38	321
		85-89	*29.67*	*70.33*	*12668*
		90 +	*28.38*	*71.62*	*2488*
	Total		**33.17**	**66.83**	**17253**

Table 1 Profile of Driving License Test results by Age and Gender
Note: Compulsory annual test after 84 years old
(Source: unpublished RTA data files)

However, the real interest in the future is the expected increase in the population aged over 84 years and their modal preferences and activity. This growing sub-population is increasingly remaining healthy, and so one might expect their absolute license-holding to increase over time. One question to be addressed is what will happen in the future if the license-holding curves shift to the right? Obviously driving is closely related. Given recent evidence (Catchpole et al. 2005; Burns 1999; Skinner and Stearns 1999) that drivers over 75 years old have specific problems in driving that are very different from younger drivers, such as the ability to avoid collisions with

parked vehicles, buildings and fences, as well as judgment of distance or vehicle control, and an ability to turn fully into lanes (suggesting compulsory fitting of distance sensors and power steering), the prioritisation of road environmental policy is likely to change markedly (Davey 2004).

Since the life expectancy of women is greater than that of men, all of the gender effects are likely to be related to whether or not an elderly person is living alone, or with spouse or partner. From age 60, the proportion of women living on their own increases rapidly with age; the same is not true for men. At age 85 and above, two-thirds of men are still living with their partner or spouse, compared to only seventeen percent of women. This has implications for mobility since many of the women in their 80s have never held a driver's license (compared to those who will be in their 80s in the future), and the loss of the male partner has immediate impacts on the modal options. Family and friend networks and support groups can provide some of the 'lost' mobility but it is often the case that actual travel activity declines substantially.

The basic differences between men and women in terms of license holding is not changed by taking into account whether or not an individual is living with a spouse or partner (Figure 5). Single men and women are less likely to be drivers across almost all age groups. Consequently, the driving status of coupled men and single women are generally the most dissimilar. For example, in the 65–74 age group, 93 per cent of men with partners are drivers, while only 56 per cent of single females are drivers. For the 75–84 age group, license holding is 84 per cent for partnered men, compared to 39 per cent for single women.

SOME KEY CHALLENGES FACING AGEING POPULATIONS

The death of a husband (typically earlier than spouse) who is the only member of a couple to have a driving licence can pose particular problems. Here, socially inclusive transport solutions will have to be found for people who are still able-bodied but do not drive. So it is important to begin devising solutions that tap the potential of new technologies to rationalise services, especially since conventional public transport will be unable to cope efficiently with an ageing suburban population. Walking to bus and train up a steep hill, roughness of many streets without footpaths are particular challenges for many older people.

Public transport operators are still, in the main, unaware of the ageing challenge and what it entails. For instance, while public transport signage may be adequate for younger people, it will not be for the elderly. Infrastructure development will have to take into account the large number of elderly people, who are particularly at risk when travelling. It will therefore be important to increase staffing on public transport and at PT interchanges. Play classical music to scare trouble makers away!

Encouraging walking (and good diet) at all ages will increase the health of ageing people and make alternatives to PT such as the car a longer term mode to give flexible accessibility; however there is a counter view about car dependence encouraging obesity, a factor which reduces mobility and life expectancy

The car is a key element in Social Inclusion. Services to the home will not suffice. It will be important for the elderly to have a social life, including visits to friends, and this will involve travel.Enabling the elderly to live like other people, even if special services are required, will help to keep them happy. Driving life will be extended as innovation-led improvements are made in

cars and driving aids. Because the elderly have slower reactions than those of working age, road safety will also be a growing concern. Criteria will have to be found to judge a person's ability to drive, even if the elderly tend to decide to drive less of their own accord. Linked to policies on social inclusion/exclusion

A major issue is to minimise the greater dependence on inadequate PT leading to social disadvantage. As the number of elderly people in developed economies increases, more individuals are likely to want to continue driving cars as their main means of transport (given their wellbeing and financial status). Cars must be made easier for older people to drive. To ensure they can drive safely, there must be changes in vehicle design, including improved access to seat belts among older people with physical restrictions, improved safety features to protect occupants, pedestrians and cyclists, wing mirrors and other rear view capability given the difficulty in moving one's neck left and right, compulsory power steering, compulsory distance warnings re side swiping, reversing, parking.

Roads and pavements should be better adapted to the needs of the elderly, including larger signage with less but crucial information (given processing abilities), much better road marking to distinguish lanes, ATIS/ITS signs that assist the elderly in avoiding specific road links and routes that are 'more challenging'.However, Flexible public transport systems suited to older passengers must also be developed as alternatives to the private car. But do not assume it will be a major 'solution' to mobility and accessibility needs

Some of the suggestions throughout the literature that are designed to reduce social exclusion through supporting people to get out and about more easily are:

- Roads should be constructed to permit greater sight distances.
- The government should restrict billboards and other advertising that tends to obstruct views of traffic signs and signals.
- To make driving easier, cars should be computerised to a greater extent.
- Cars should have fewer blind spots.
- Mirrors should offer better vision.
- Instrument panels should be made easier to see. And
- PT needs improvements, including:

    - further installation of elevators and escalators in stations;
    - renovations that make it possible to walk without stepping up or down;
    - signs that are easy to read and understand and that maintain uniform standards, making recognition easy for people who transfer between different transport modes or different operators;
    - information services that make transport systems easier to use;
    - better rest areas within the transport system; and
    - lowering of vehicle floors to platform levels.

THE ELDERLY AS PEDESTRIANS IN THE ROAD ENVIRONMENT

Walking in the road environment is dangerous for the elderly. The injury rate not greatly different from other age groups excluding the very young, but the fatality rate is much higher, especially

for males. Thus there is a need for more attention to urban design for safe walking. The Bogota position – make it safe for children and it will be safe for everyone, including seniors.

DRIVING TESTS: COMPULSORY OR MANDATORY?

The loss of a driving licence through failing a driving test or through a personal decision to stop driving (self-regulation) is often accompanied by a major adjustment in lifestyle. Especially important is the sheer loss of independence that many elderly people immediately feel such that there is a strong resentment, especially if the licence is withdrawn by the authorities, and a sense of lost life. This would not be so bad if there were adequate alternative transport means but in Australia this is usual not the case. The social exclusion impacts typically ignored if ones fails an annual driving test. This is looming to be a very serious social equity matter as future generations have become more dependent on the car.

The OECD view expressed as recent as 2005 is a very sensible way forward to improve on the quality of life while being conscious of the need to ensure safety on the roads. In particular the OECD suggest that rather than imposing mandatory driving tests once people reach a certain age, they recommend community-based assessments involving doctors, police and social services, as well as the family and friends of older drivers. At the same time, they argue the need for a better approach to assessing and responding to the disabilities that can hamper safe driving. This is also consistent with a larger array of graded licences that recognise that many elderly drivers do not drive at night and when it raining and typically drive around local and familiar streets. Driving tests in Australia are often undertaken at locations quite unfamiliar to the elderly and hence are quite daunting.

Recently in New Zealand a high court ruling in response to human rights claims has mandated that annual driving licence tests for a specific age group are discriminatory. Consequently New Zealand has stopped annual testing fort older residents.

But, providing transportation alternatives for the elderly is not just a matter of public safety. In many cases, otherwise active seniors lack private transportation, either because they never learned to drive, or, because they cannot afford a car. Even more important, mobility is critical to the emotional wellbeing of people of all ages, and continued interaction with family, friends, and the larger community is a key ingredient in maintaining the psychological health of our ageing citizens. That interaction is made easier when acceptable transportation alternatives are available.

ENDNOTES

1 Old seniors are those aged 75 years to 84 years, whilst those aged 85 years and over are referred to as the elderly (Alsnih and Hensher, 2003).

2 The high incidence of failure for individuals under 85 years old is of interest as well, with the majority being individuals who have moved to Australia and/or who have had a license previously cancelled.

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AGEING WITHOUT DRIVING

KEEPING OLDER PEOPLE CONNECTED

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In Australia, successive cohorts are characterised by higher proportions of drivers (especially women) on entry to old age. While many older people will continue to drive safely, a significant proportion of our older citizens will require alternate transport options especially as they move into their eighties and beyond when sensory and cognitive disability increase. In order to manage the transition from driving, individual interventions will need to be implemented to help older drivers recognise their driving limitations while providing resources to help them stay connected and maintain a good quality of life.

INTRODUCTION

The ageing of Australia's population has focused attention on policies and programs that promote healthy and active ageing (Browning and Kendig 2004; WHO 2002). While concern has been expressed about the 'burden' of ageing populations associated with increasing disability and chronic health conditions with age (Australian Government 2007), ageing is characterised by heterogeneity in health and wellbeing and many people desire and achieve active lives in their old age (Baltes and Smith 2003). It is well established that active lifestyles benefit people across the lifespan and older people can gain health and social benefits from being physically, mentally and socially active (Armstrong et al. 2000; Glass et al. 2006). Transport accessibility is a key determinant of the ability of older people to remain healthy and active in their old age and to access services and programs. As such transport is central to the health of older people.

In Australia, driving is an important transport choice for older people. Driving contributes to accessing social and recreational activities, shopping and health and other services. Governments, researchers and health professionals have been concerned with issues associated with older drivers such as safety, access to alternate transport and the health impacts of driving transitions (Liddle 2003; Liddle et al. 2004; Victorian Parliament 2003). The ageing baby boomer[1] cohort, rely heavily on driving for transport and the next 30 years will see a sharp increase in the number of older drivers (Pachana and Long 2000). Thus driving and other transport options for older people are becoming increasingly important policy issues both in the transport and health sectors. The focus of this chapter is the role of driving in older peoples' lives, the impacts of transitions from driving to driving cessation associated with changes in health status and program responses to the maintenance of community mobility in older people.

The first section examines patterns of driving in older adults, safety issues and the association between driving and health. We next examine older people's perceptions of transport options. Finally, targeted interventions and program responses to support older people in the maintenance of mobility and social connectedness, are discussed.

DRIVING PATTERNS AND HEALTH RISKS

In Australia, successive cohorts are characterised by higher proportions of drivers (especially women) on entry to old age. We are a nation who is increasingly reliant on cars for transport and the number of older drivers is expected to rise dramatically over the next two decades (OECD 2001). Whilst in rural areas, alternatives to driving are limited, even the majority of older people living in metropolitan areas have spent their formative years living beyond the reach of public transport and this influences their attitudes and current use (or rather non-use) of public transport (Road Safety Committee 2001).

DRIVING PATTERNS

Two key longitudinal studies of ageing in Australia have examined driving patterns and transport use of older people and have found that people continue to drive until late in life. In the Australian Longitudinal Study of Ageing (Anstey et al. 2006) half of those aged between 80 and 84 years were driving at baseline, but this percentage decreased to 15.2 per cent at five years follow-up. Of those aged 85 years and over about one fifth were driving at baseline and at five years follow up only 3.5 per cent still were driving. Predictors of ceasing driving were age, low grip strength, poorer cognitive performance and lower self-rated health.

The baseline survey from the Melbourne Longitudinal Studies in Healthy Ageing program (MELSHA) examined transport use by 1,000 people aged 65 years and over (Stacey and Kendig 1997). Sixty-four percent of the sample were current drivers, 12 per cent had ceased driving and 24 per cent (mainly women) had never driven. Women are often more disadvantaged with respect to transport options (Turcotte 2006).) Fifty-four percent of those aged 65 years and over drove a car as their main form of transport. Three quarters of men and 35 per cent of women drove a car as their main form of transport. Those aged 75 and over were less likely to drive a car as a main form of transport (48 per cent of those aged 75 and over compared to 60 per cent of those aged 65 to 74 years). Loss of confidence and having a medical problem were the main reason for ceasing driving and 28 per cent reported modifying their driving patterns due to ill health. Fourteen percent of the sample (mainly women) used public transport as their main form of transport. Of the non-drivers 38 per cent said they had difficulty using public transport, especially getting on and off vehicles.

Over a 6-year follow-up period, the number of current drivers in the Melbourne Longitudinal Studies on Healthy Ageing program decreased by 50 per cent as people died or entered nursing homes, yet of those remaining in the community few ceased driving (Unsworth et al., forthcoming). Men aged in their eighties were most likely to cease driving. Increasing numbers of participants modified their driving by driving less often, driving locally or driving in daylight only. Drivers were more likely to modify their driving habits if at baseline they were older, dependent in instrumental activities of daily living (IADL), such as shopping, and rated their eyesight as poor. These findings are in contrast to those of Baldock et al. (2006a; 2006b) who noted that self-regulation was inadequate amongst those with certain functional disabilities, namely poor contrast sensitivity,[2] speed of information processing and visuospatial ability. In the MELSHA study age, IADL dependency and poor eyesight predicted ceasing driving, but in addition women were three times more likely to cease driving than men and people who rated their incomes as 'comfortable' were more likely to cease driving. The role of gender was not unexpected given the lower use of cars

in this cohort of women. This finding is also consistent with previous research that indicated women give up driving even when they may remain fit to drive (Siren et al. 2004). The role of income was an interesting finding and it was assumed that those on higher incomes may be able to afford alternate accessible modes of transport such as taxis. Whilst older drivers do modify their driving behaviour as they age, few drivers cease driving voluntarily. Further research is needed to identify ways to support older drivers to continue to drive safely and to consider alternative transport options.

HEALTH ISSUES AND RISKS

While older people do modify their driving habits they are at greater risk as drivers and passengers (Charlton et al. 2006). The accident rate per kilometer driven is the highest in those aged 65 years and over (Elliot et al.1995; Federal Office of Road Safety 1996; Fildes et al. 1997). Older drivers have the greatest absolute risk, perhaps since they are more likely to be adversely impacted by a crash than a younger person, for reasons such as frailty (Fildes 1997). Compared to adults between 25 and 45, older drivers have 3.5 times the risk of an adverse outcome. Older drivers have a 13 per cent risk of fatality and 10 per cent risk of serious injury when they are involved in a crash, figures that are lower than for young people (Australian Transport Safety Bureau 2007; Fildes et al. 2001). However, when the figures are adjusted for their relative vulnerability and the distances travelled, their relative risk is high (Fildes et al. 2001). In Victoria, Transport Accident Commission data indicate that drivers aged 75 years and over have the highest fatality claim rate (Victorian Parliament 2003). However there is conflicting evidence about whether a person's older status is to 'blame' for a road accident. The likelihood is higher for certain accidents, such as when the driver has failed to observe oncoming traffic, but less for drug and alcohol related accidents (Road Safety Committee 2001). Nor is there support for the anecdotal statement about accidents being related to older people driving slowly.

We do know that with ageing there are a range of impairments and health conditions that can impact on safe driving, such as reduced reaction time, increased frailty, chronic illness and associated medications, and declining cognitive and sensory functioning (Anstey et al. 2006; Lyman et al. 2001). In their model of enabling safe driving Anstey et al. (2006) also argue that as well as cognitive, sensory and physical function enablers of driving safely, self-monitoring of enabling factors and beliefs about driving capacity are also important determinants of safe driving.

While older drivers may be at greater health risks caused by traffic accidents the negative health consequences of social isolation and inability to access services associated with poor transport options are also well documented. There is growing evidence that good access to transport is associated with higher perceived quality of life. Indeed, car ownership and access to transport were independent predictors of quality of life in the United Kingdom's 'Growing Older Programme' (Gilhooly et al. 2003). As a recent Statistics Canada study suggests, having a driver's licence or a bus pass can dramatically improve the quality of life for seniors (Turcotte 2006, p. 1):

> It is more difficult for a person to be active and independent if their access to transportation is limited. To socialise, to acquire the basic necessities of life, to obtain other services or to go somewhere just for the fun of it – it is crucial to be able to get around.

Positive interactions with others also influence health status. There is evidence of a link between social activity and mortality and morbidity. For example, Glass and colleagues found social activities to be predictive of mortality and depressive symptomology (Glass et al. 1999; Glass et al. 2006). Good social networks also reduce the risk of disability and assist recovery from short-term disablement (Mendes de Leon et al. 1999). Driving cessation is one factor that limits social engagement (Marottoli et al. 2000) and loss of independent means of transport can have negative psychological and social consequences. For example, driving cessation can lead to role loss, depression, cognitive ill health and isolation (Fonda et al. 2001).

OLDER PEOPLE'S VIEWS OF TRANSPORT OPTIONS

The Royal Automobile Corporation of Victoria (RACV) has conducted a number of studies assessing road usage amongst older people. Their rural road safety report highlighted that having alternative means of transport was key to people's decisions about driving cessation. In a survey of 400 rural Victorians aged 65 and over, the inadequacy of alternatives was noted, yet the majority of older people did not make plans for when they could no longer drive. Harris and Tapsas (2006) reported the outcomes of face to face interviews with 125 RACV members who had recently retired from driving to investigate why they had stopped and how they were adjusting. A third stated that they had become incapacitated, with 22 per cent being advised by their doctor to relinquish driving. Others who stopped driving cited being too old, loss of confidence, and finding driving stressful or unsafe. Almost half found it difficult to adjust to no longer driving and felt disconnected. A further 21 per cent found it particularly challenging, some because they were unable to use other forms of transport without assistance. The respondents mainly relied on taxis or lifts from others, with smaller proportions using public or community transport.[3] Around a third found buses and trains too difficult to use.

Although few people consider and plan for driving cessation, feedback from those who have stopped driving highlights that they can list both advantages and disadvantages. The anticipated problems with public transport use and continuing to carry out activities were commonly less than had been anticipated. Whilst there can be a sense of loss and reduction of independence associated with giving up driving, several people have highlighted the positives. After going through the transition, they note that they have reorganised their daily activities so that they can still maintain valued roles in society, either new roles such as volunteering or existing roles such as caring for grandchildren (Harris and Tapsas 2006).

Driving is an important activity in Australian life but as we age we need to face (both as individuals and as a society) that the transition from driving to not driving will impact on increasing numbers of older people and their families. How should we respond in order to maximise independence and wellbeing for our older citizens?

INDIVIDUAL INTERVENTIONS AND TRANSPORT APPROACHES TO SUPPORT THE TRANSITION FROM DRIVING TO DRIVING CESSATION

Driving cessation impacts on independence and quality of life but it is also often a marker of disability. Reducing disability in older people has the potential to delay ceasing driving and it is from this perspective that promoting healthy ageing across the lifespan should be a public health priority (Browning and Kendig 2004). However we also need to provide programs and interven-

tions at the individual, public health and transport infrastructure levels to support older people with significant sensory, physical and cognitive disabilities in the transition to driving cessation.

Driving cessation is not an unpredictable event and so there is scope for planning (Persson 1993). The literature shows that it is often a staged process, such that people can test out alternative options prior to ceasing driving. Many people face anxieties about their capacity to drive and continue to do so whilst being apprehensive about their own and others safety. In interviews, people have discussed the staged approach to ceasing driving, sometimes feeling relief once they phase the car out all together (Harris and Tapsas 2006). In using the car for fewer purposes, people can often find other means to conduct their daily activities. Driving cessation programs should complement this by improving awareness of locally available alternative transport options and assist older people to become more accepting of accepting help from others.

INDIVIDUAL INTERVENTIONS

A range of voluntary programs exist in Australia, aimed at enabling older people to assess their ability to drive, to self-regulate and to adopt safe driving strategies. Several of these are state-based, such as VicRoads 'SafeDrive' scheme. In Queensland, Liddle and colleagues piloted resources for a driving cessation program (Liddle et al. 2004), including an information session and brochure, a small group session and a website. Key features were evidence based resources, relevance to older people, locally relevant resources, and incorporating contact details to find further information. Reference groups including health professionals, older people and their family members confirmed the relevance and appropriateness of the resources' format and content. Further evaluation is currently underway.

A number of cognitive performance interventions, aiming to extend the period of safe driving, have been trialed with some positive outcomes (Roenker et al. 2003). More information is needed about the specific 'dose' of intervention and the type of older person who may gain most benefit from such programs. These studies have not addressed the psychological impact of potential driving cessation.

While self-regulation of driving is the preferred model for most older people, mandatory testing of older drivers varies across the States in Australia. Victoria and the Northern Territory do not having mandatory age-related assessments. In Victoria, all drivers are required to report any disability that may negatively affect their driving, under the Road Safety (Drivers) Regulations. The evidence suggests that a global program is not necessary and that the focus should be on targeting those at high-risk of unsafe driving, due to specific health problems. Baldock et al. (2006a; 2006b) have reported that self-regulation is not effective. Avoidance of challenging driving situations was not related to performance on an on-road driving test. Objectively measured driving ability was more likely to be related to the avoidance of specific situations, such as parallel parking and night time driving. The community participants confirmed that their desire to maintain their current lifestyle was the key barrier to relinquishing driving.

There is some evidence that programs can ameliorate the negative consequences of driving cessation or enable older drivers to drive for longer. Windsor and Anstey (2006) reviewed the available literature and posited a framework for driving cessation programs based on social cognitive theory and problem solving. Such an approach that aims to improve self efficacy and reduce perceived threats to independent mobility and sense of self, appears promising. A focus on preparing the person and their family for 'life after driving' was recommended. This points

to interventions not only at the individual, but also across the broader community, including alternate transport options. As Owsley and colleagues note in their report on a driving safety trial for older drivers, it is unlikely that individually oriented programs alone will influence subsequent accident rates (Owsley et al. 2004). Environmental strategies will also be needed, such as the US-based Older Drivers Project (Wang and Carr 2004), which uses a multi-sectoral approach to managing issues related to older drivers at a policy level. In this approach the aim is to keep drivers safely on the road by optimising the driver, the environment and the vehicle. 'In this approach, driving cessation is recommended only after the safety of the driver cannot be secured through any other means' (Wang and Carr 2004, p. 143).

ALTERNATE TRANSPORT TO DRIVING

Walking and cycling are simple modes of transportation. The latter is less common amongst older people. Local governments are increasingly providing cycle paths for leisure purposes, but this does not assist those who need to use roads to cycle, for example, to shops. Greater consideration of the design of cycle lanes for older cyclists may be needed. However, cycling is generally not an ideal option for older people, since the prevalence of visual and balance impairment is greater in this population group. Those who are unable to drive are also unlikely to be able to cycle.

Scooters and other small electrified vehicles are alternatives to cars, but their broader usage requires infrastructure provision akin to that available for the car (such as parking, maintenance, and recharging facilities) before they can become a common part of our neighbourhood scenery. Community perceptions on their use also need to be addressed. Perceived cost and safety concerns aside, there is a stigma associated with their use. They also have their own safety issues and are at risk of overturning when users are transferring across road levels or surfaces (US Architectural and Transportation Barriers Compliance Board 1999). Unlike other vehicles, they currently have very limited regulation. A driving license is not required for their use, nor do they have mandatory roadworthiness checks. They may thus be a hazard to drivers and other road users.

Community transport has variable reach and also has an associated stigma amongst potential users. The current piecemeal system of provision in Australia requires greater coordination to enable more cost-effective people moving, particularly during off-peak periods and in rural areas. Taxis are helpful for local travel, but a taxi voucher scheme cannot assist longer distance travel. Rather than door-to-door private enterprise schemes, one solution is to merge public and private transport options, with public transport carrying users longer distances and local transport providing the connections from termini to home.

Research from the United Kingdom Growing Older Program reported that whilst car manufacturers are addressing how to make driving easier and safer for older people, public transport providers tended to view older users negatively. For instance, older people may reduce profits by requiring free or low cost access to services. Public transport operators were more concerned about people with disabilities, notably wheelchair-bound customers rather than older users per se (Gilhooly et al. 2003). There was minimal consideration of catering for older people with sensory impairments. Several barriers to public transport use can be readily addressed, such as cleanliness, large print timetabling information and audible announcements. Many of the design features are being addressed, but are only going to assist those living where a public transport system is economically viable. As there is great variability in the availability of public transport,

population differences in satisfaction with the provision and usage of public transport could be expected. General concerns about personal security in travel after dark on public transport are common, as are perceived difficulties carrying heavy loads and the unpredictability of public transport schedules. Interestingly, baby boomer respondents to the Growing Older Program were less likely to be satisfied with public transport than those aged 59 years and over (Gilhooly et al. 2003). Younger baby boomer respondents listed more barriers to public transport use than older respondents. Transport planning will need to accommodate both perceptions and heightened expectations in the ageing community. Less than half of the Growing Older Program respondents thought that transport operators considered the needs of older people.

Mobility substitutes include Internet services such as banking and shopping, home delivery and in-home services. Only the latter is likely to maintain social connectedness. Another option is to enable people to live closer to amenities. As house prices rise, people are moving to regional and rural areas to increase their fluid assets but infrastructure is often poorer. The 'sea change' phenomenon where people retire to coastal areas in Australia may force the improvement of transport infrastructure. In an analysis of Canadian data Turcotte (2006) found that proportionally higher numbers of seniors living in small towns and rural areas owned a vehicle and were able to drive. Nevertheless, they were potentially more vulnerable to social isolation as they aged, given that they did not have public transport options. Financial incentives could be provided for transport sharing and for moving to housing closer to amenities and/or public transport.

There are a range of technological strategies that can be implemented to improve road safety. Transport experts have advocated the use of larger road signs and tactile road markers. Planned placement of road signs and intersections is important for older road users, since a person's field of view decreases with age. Intersections where the driver needs to see beyond 90 degrees in both directions can increase the likelihood of collision. Road safety reviews can assess the potential risk in specific areas and recommend changes accordingly. Vehicle adjustments such as assisted breaking systems (ABS), power steering and position sensors are becoming more common. More cars are fitted with airbags, to reduce impact on drivers and passengers and there is technology available to adjust speed to speed limits, both within and outside the vehicle. Broader introduction of such measures is reliant upon commercial and cultural needs being met. Victorian statistics suggest that there are a large proportion of cars over 10 years old, so such adaptations will take a while to impact on the overall population.

CONCLUSION

Remaining active and socially connected are important determinants of health and wellbeing for older people. Accessible transport assists older people to stay connected. In Australia driving is a key transport option for older people and as the baby boomer cohort ages the numbers of older drivers will increase. While many older people will continue to drive safely, a significant proportion of our older citizens will require alternate transport options especially as they move into their eighties and beyond when sensory and cognitive disability increase. In order to manage the transition from driving, individual interventions will need to be implemented to help older drivers recognise their driving limitations while providing resources to help them stay connected and maintain a good quality of life. Transport alternatives to driving need to be safe and accessible for older people. Perhaps the ageing of the baby boomer cohort will require some rethinking of

our reliance on cars for transport, an outcome that has the potential to not only benefit older people but also address climate change and environmental issues.

ENDNOTES

1 A baby boomer is someone who was born during a period of increased birth rates, or baby boom. The term is particularly applied to those born during the post World War II period of increased birth rates. In the United States, the term has attained iconic status. The term commonly refers to people with birth years after World War II and before the Vietnam War, potentially encompassing more than one generation. The terms 'baby boomer' and 'baby boom' are widely used, even in countries that did not have the sustained growth observed in United States families over the same interval. The term 'boomer' has global use, although the generation is also known in Europe as the 'Generation of 1968'.

2 **Contrast sensitivity** is the ability to discern between luminosities of different levels in a static image. Contrast sensitivity varies between individuals, being greatest at approximately 20 years of age, and at spatial frequencies of about 2–5 cycles/degree.

3 **'Community transport'** (CT) is provided *by* the community for the specific local needs of those living in the area concerned. As a rule, CT services develop due to the efforts of local people to address the outstanding transport needs of their community. Where private cars cannot be used and/or conventional public transport modes are absent or inappropriate, community groups establish a transport operation of their own. These 'schemes' are commonly operated wholly- or mainly- by unpaid local volunteers, such that CT belongs to the 'voluntary sector', albeit with some financial support from local government. The main benefits of CT are that local people have greater understanding of the travel needs and difficulties within their community and are thus more responsive. In addition, the use of volunteers avoids the potentially huge labour costs.

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AUSTRALIANS WITH DISABILITIES

TRANSPORT DISADVANTAGE AND DISABILITY

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This chapter examines transport in the context of Australians who have some form of disability. It examines the travel behaviour of Australians with disabilities, identifies their transport needs and problems and highlights measures aimed at alleviating transport disadvantage. The major challenges of providing universal access are identified.

DISABILITY AND TRANSPORT DISADVANTAGE

It has long been recognised that people with disabilities face difficulties in travelling and that this can be associated with limited life opportunities (Travers Morgan 1992; Social Exclusion Unit 2003; Lucas 2004; Dodson et al. 2004). These difficulties are typically seen to arise as 'barriers' to access and use of transport systems as detailed in the typology developed by Evans and White (1998) as illustrated in Table 1.

It is worth noting here an important distinction in terminology – or models of disability – that has significant bearing upon the provision of transport services for people with disabilities. The medical model of disability proposes that a person with a disability is handicapped by his or her *impairment*, whilst the social model of disability is based upon the premise that it is the *environment* that handicaps (Finkelstein 1980; Oliver 1983). Disabled People's International (DPI) clarifies this definition, 'a disability is the functional limitation within the individual caused by physical, mental or sensory impairment… A handicap is the loss or limitation of opportunities to take part in the normal life of the community on an equal level with others due to physical and social barriers' (DPI 1982).

Evans and White's (1998) typology focuses on the physical barriers to access, but other barriers leading to transport disadvantage are important to note. A UK report on social exclusion and public transport noted four generic types of barriers: affordability, acceptability, availability, and accessibility (DETR 2000), but there are many social and psychological barriers resulting in transport disadvantage for people with disabilities, and indeed other members of the public. Society's perceptions of people with disabilities can compound handicaps. Goldsmith (1976) notes that:

> In the action of life the person with a disability is doubly handicapped. First, he is handicapped simply because he does not physically have the capabilities that others have. This can have a variety of effects, causing social, financial and emotional deprivations. Second, he is handicapped because he is perceived by others as handicapped, because there is a social doctrine which says that to have a disability is to be blighted and impoverished (Goldsmith 1976, p. 13).

People with WALKING DISABILITIES may:	• have trouble negotiating steps and stairs • be able to move only very slowly • fatigue easily • have balance problems, especially in a moving vehicle • require safe floor spaces • face risks in a moving crowd • find it difficult to walk over unstable surfaces • need a wider space to walk in
People with MANIPULATORY DISABILITIES may have difficulties such as:	• operating handles, switches or ticket machines • the placement and shape of handrails
People with VISION IMPAIRMENT may have difficulty with:	• identifying changes in direction, level and hazards such as platform edges • distinguishing between road and pedestrian areas • projecting signs along the path of travel • the size, colour, contrast and illumination of signs • knowing whether a lift has arrived at the right floor • negotiating steps safely • avoiding obstacles • sudden direction changes on pathways • low lighting on stations and steps
HEARING problems may be:	• hearing announcements such as 'next train' or emergency announcements • detecting approaching vehicles • buying tickets, obtaining timetable information • making phone enquiries
Those with INTELLECTUAL DISABILITIES may have trouble with:	• finding the way in an unfamiliar setting • interpreting signs and information • coping with unpredictable changes, such as cancelled trains • coping with complex instructions or timetables
A person with a PSYCHIATRIC DISABILITY may have difficulties due to:	• stress or anxiety in crowded situations • unexpected changes • unpleasant interpersonal encounters • fatigue and confusion
WHEELCHAIR USERS have difficulties associated with:	• uneven, bumpy or broken services • soft surfaces, such as sand • level changes where no ramps are provided negotiating kerbs • insufficient or badly designed parking spaces

Table 1 Disability Barriers to Travel (Adapted from Evans and White 1998)

People need to feel that they are accepted by society – that is, that they are a part of society, not *apart* from it. The majority of people (to a greater or lesser extent), compare themselves to others, as a form of self-questioning and appraisal, looking for clues to establish whether they fit into what is deemed socially acceptable and normal. For people with disabilities, many of the clues indicate that they do not conform to what is deemed 'normal', and so many feel apart from society. Society reinforces these clues, as Thomas (1982) points out:

> To be perceived as a handicapped person is to experience a distinct social status. These perceptions and the values associated with them give meaning to being handicapped, and such meaning appears to involve feelings and styles of behaviour which provide the handicapped person with clues to his social and personal worth (pp. 16–17).

A major result of these barriers is reduced trip making compared to others in society: people with disabilities make only a third of the number of trips (8 per week) as the rest of the community (24 per week). Indeed a common misconception is that there is no demand for travel by disabled people because trip rates are low:

> It is all too easy to fall into the trap of seeing no people with disabilities in a particular situation and then assuming that there is no demand from people with disabilities for the facility or service. The reality, more often than not, is that the demand is there, but the way things currently are precludes access (Ker 1996, p. 14).

A related misconception is unestimated scale of disability in the Australian community. ABS (2003a) reports that 20 per cent of Australians report a disability of some kind. This is considerably higher than that reported in Europe (10 per cent, ECMT 1986) and the UK (14.2 per cent, Martin et al. 1988a; 1988b) although different definitions are often applied, acting to confuse comparisons of this kind. There are also additional, perhaps less obvious, disabilities to consider – such as asthma, epilepsy, obesity and diabetes – and temporary disabilities that result from some kind of injury, that are rarely recorded, reported or classified as disabilities in population statistics.

What is not often understood are the strong links between the characteristics of people who have disabilities and other types of transport disadvantage. Table 2 lists social groups which are commonly associated with transport disadvantage (based on Travers Morgan 1992; Social Exclusion Unit 2003; Lucas 2004; Dodson et al. 2004). Statistics that measure these factors for the Australian community are shown for those who have disabilities and also for those without disabilities.

It is clear from this that disability in this context is strongly interlinked with transport disadvantage and its association with low income and unemployment but with older age in particular. The later is significant because the share of Australia's older population is forecast to grow into the future; indeed, in this century, the proportion of the population aged 65 and over is set to rise from 13 per cent of the total population to between 29 per cent and 32 per cent. More significantly, the proportion of the population aged 85 and over is set to rise from 1 per cent of the total population to between 7 and 11 per cent. 'Growth in this age group is of particular interest,

	Social Groups Commonly Associated with Transport Disadvantage	Australians With a Disability	Australians Without a Disability
LOW INCOME	Median gross personal income per week, persons aged 15-64	$255	$501
UNEMPLOYED	Unemployment rate	8.6%	5.0%
BENEFICIARIES	Population whose principal source of personal income is government pension or allowance	55.1%	18.1%
YOUTH/CHILDREN	% of population 24 or under	8.5%	91.5%
WOMEN	% of female population	20.1%	79.9%
	% of male population	19.8%	80.2%
ELDERLY	% of population 65+	55.7%	44.3%
	% of population 90+	92.1%	7.9%
DISABLED	Total population	20.0%	80.0%
OUTER-URBAN DWELLERS Estimated resident population	Major cities	62.6%	67.9%
	Inner regional	23.6%	20.7%
	Outer regional and remote	13.8%	11.4%

Table 2 Disability Within the Context of Other Social Groups Associated with Transport Disadvantage – Australia (ABS 2003a; 2003b)

given the potential need for support among the frail aged, for example in the area of assisted housing, health and disability services' (ABS 2004).

In addition Table 2 suggests that a higher share of Australians with disabilities live in regional and rural Australia compared with those who do not have disabilities. The implication is that there is a higher representation of disability in regional and rural communities where car dependence is more pronounced and where public transport access is limited or non-existent.

An interesting question arises from the data in Table 2: is disability a cause of low income or unemployment or is lack of transport a factor which acts to influence income and employment? There are many examples where lack of suitable transport has been cited as a barrier to employment. The Australian Human Rights and Equal Opportunity Commission (HREOC) national inquiry into disability and employment (HREOC 2005) identified difficulties in getting to and from work including lack of physical access and high transport costs (e.g. due to the need for taxis) as major barriers to work. This mirrors similar findings from the US, where, 'in a 1994 Harris poll, 24 per cent of Americans with disabilities cited a lack of affordable transportation as the reason for their unemployment… Full access to public and private transportation is perhaps the single largest barrier to employment for people with disabilities' (CFILC 2005). One submission to the HREOC Inquiry from the Physical Disability Council of Australia (PDCA 2004) cited fourteen individual case studies, eleven of which responded that transport was an important consideration. Accessibility, affordability, reliability, and safety of public transport were common concerns. Even when attempts had been made to make public transport more accessible for people with disabilities (PWDs) problems still arise:

> For example, the train lines in Perth are 'accessible' [*sic*] however some stations are not level with the train and there are usually gaps between the train and station in which small tyres can become stuck. The solution for this is to provide ramps, however the ramps are not available at all stations and require you to ring in advance a few hours before travelling. This is both impractical and inconvenient and does little to promote empowerment and independant [*sic*] living for PWDs [people with disabilities] (PDCA 2004, p. 10).

Whilst evidence supports the correlation between employment opportunities and transport availability and accessibility, there are other quality of life indicators that are co-dependent upon transport that are often overlooked.

> Transportation enables us to work, choose where to live, pursue an education, access health care, worship, shop, and participate in recreational activities… For many people with disabilities, life is severely limited by the lack of transportation. Some people with disabilities who are willing and able to work cannot do so because of inadequate transportation. Others cannot shop, socialise, enjoy recreational or spiritual activities, or even leave their homes for the same reason. Some individuals with disabilities must live in institutions solely because of the lack of transportation to medical appointments (NCD 2005, p. 8).

In a car dependent Australia, limitations on the ability to drive has been seen as a major constraint on the personal mobility of Australians with disabilities; 'The greatest mobility deficiency for people with disabilities arises from the more common inability to drive a car. This is an often unavoidable consequence of disability' (Ker 1996, p. 3).

TRAVEL AND DISABILITY

While the frequency of travel of disabled people is lower than the rest of the population, travel that does occur has many similarities to other groups; Figure 1. Car driving in particular is the dominant form of travel. Getting a lift from others is the next most common form of travel followed by walking and public transport use.

Compared to the rest of the Australian population, people with disabilities demonstrate over five times as much lifted travel and greater walking. Public transport usage is slightly less.

There is a strong relationship between the severity of disability (referred to as *core-activity limitation* in Figure 2) and transport mode for those able to travel: Figure 2.

Those with 'profound or severe' disabilities mainly travel by getting a lift or else travel less. Driving and public transport use is less in this group. The implication is that more severe forms of disability act to limit personal freedom and to increase reliance on others for lifts. Although getting a lift is much appreciated by those being helped, some people with disabilities experience frustration at the resultant lack of control, autonomy and independence. Being helped can be viewed as synonymous with being helpless, and in this regard, the reliance on others reinforces this view.

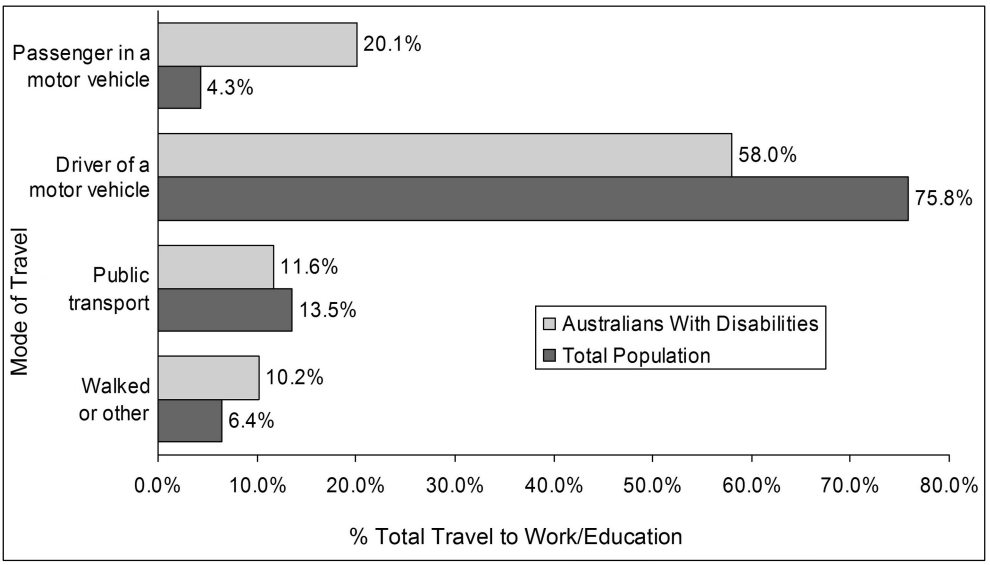

Figure 1 Mode of Travel to Work or Education (ABS 2003a; ABS 2006)

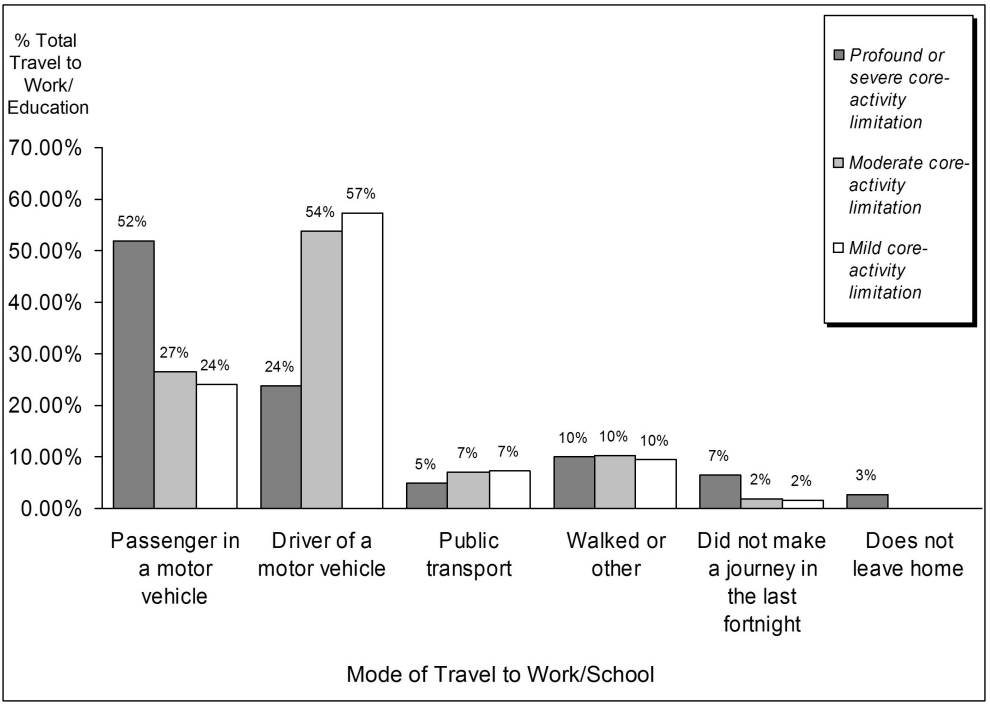

Figure 2 Mode of Work/Education by Nature of Disability – Disabled Australians (ABS 2003a)

TRAVEL ASSISTANCE FOR PEOPLE WITH DISABILITIES

Table 3 summarises the forms of transport assistance available for Australians with disabilities.

Nature of Assistance/Mode		Details
Private Transport	MOBILITY ALLOWANCE	• assistance to people with disabilities who are in paid employment, voluntary work, vocational training, undertaking independent living/life skills training or a combination of paid work and training and who are unable to use public transport without substantial assistance • $Aust 74.30- 104.00 per fortnight (2007). A lump sum advance equal to 26 weeks allowance may be paid once a year.
Community Transport	COMMUNITY TRANSPORT	• Range of local small scale services operated by voluntary and self help groups for the specific needs of disadvantaged groups • Much funding from the Federal Home and Community Care program for vehicles
Taxis	TAXI USER SUBSIDY SCHEMES	• Provision of subsidies to reduce fares for a limited number of taxi trips. Number of trips and level of subsidy varies by measured degree of disability. Policies vary between states.
Public Transport	CONCESSION FARES	• Fare reductions ranging between free to half fares for people with disabilities of various types for travel on public transport services
	GENERAL SERVICES	• Under the requirement of the Federal Disability Discrimination Act (DDA) all new public transport services and infrastructure commencing since 2002 are to be made fully accessible to persons with disabilities. Excludes school buses. • Public transport in all states and territories have implemented a program for retro-fitting existing infrastructure to meet the requirements of the legislation within a generally 20 year timeframe.
	SPECIALIST SERVICES	• A small number of specialist bus services are available for persons with disabilities in some states.

Table 3 Local Travel Assistance Available for Australians with Disabilities

In 2005 some 49,215 Australians received the mobility allowance, which has demonstrated a 40 per cent increase in uptake between 2000 and 2005 (DoEWR 2005). During this period the largest increases were of people in the older age groups. The HREOC national inquiry into disability and employment (HREOC 2005) recommended increases in the size of the mobility allowance due to identified financial barriers limiting access to employment for disabled people. As a measure targeted to work or education, this is a measure which does not address needs for access to other trip purposes.

Community transport encompasses a large range of service types operated on a local scale by usually voluntary sector groups. It can encompass:

- Door-to-door or door-through-door (where a person needs assistance getting out of their house and into the vehicle)

- Locally operated to serve the needs of community members
- Designed for people who are unable to use other forms of transport
- A low cost form of transport (Harris and Tapsas 2006)

These can be highly valued services for people with disabilities as they meet particular, personal needs often taking passengers to otherwise difficult to reach destinations such as medical appointments or shops at a low cost. Community transport services however are often poorly resourced. A survey by Harris and Tapsas (2006) of community transport facilities in Victorian local government areas found that most buses used for community transport (77 per cent) were used for door-to-door transport. However 33 per cent of responding service providers reported undertaking no form of promotion of their services, most often citing an inability to meet current demands as the main reason. This is perhaps unsurprising considering that of the average 3.28 buses that each municipality had, only 13 per cent were low floor buses and many of the services are volunteer dependent. The share of community buses that are accessible to people with disabilities is known to be low. Typically these vehicles are highly valued by those in the community who have disabilities.

Battellino (1994) states that community transport vehicles are often provided on a welfare basis and that, 'because of the limitation of resources, services are supplied only to a small section of the deserving population who have become aware of and have availed themselves of the service'. As such there is expected to be a large pool of untapped demand for such services which is not met either because of lack of resources, or because those in need are either not aware of, or choose not to use, the services available. A large range of studies have identified poor utilisation of services in this sector due to lack of sharing of vehicles between voluntary groups who own them (e.g. Travers Morgan 1992).

The door to door features of Taxi services make them an attractive, though expensive, option for people with disabilities. A range of specialist user subsidy schemes is operated by each state to assist in off-setting these costs. For example the Melbourne Multi-Purpose Taxi Program (MPTP) allows members to travel in any licensed Victorian taxi and pay half fare. However there is a maximum discount of $30 per trip and a limit to use of up to $1,030 per year. Approximately 180,000 people are registered users of the program and an estimated 5.5 million trips are taken each year requiring a $270 average subsidy per user (Harris and Tapsas 2006, p. 8).

Problems with these services exist however most noticeably for rural users of the service where the $30 cap provides significant problems and also in a lack of integration with other transport services. Nonetheless taxi services are convenient means of transport for people with disabilities and one that many see as a vital resource. Harris and Tapsas (2006) wrote that stakeholders wanted to see a greater utilisation of them: 'Seeing taxi services as a key transport resource and integrating this service with other forms of transport, especially community transport, was seen as vitally important' (p. 16).

A major problem with taxi user subsidy schemes throughout Australia has been growing demand for membership and pressures from existing members to increase the size of annual trip restrictions. In addition up-scaling the size of taxi vehicles which are accessible to people with disabilities has been required. Each of these systems are highly pressed during commuter peaks due to high levels of booking for access to wheelchair taxis and limited fleet size of these vehicles.

Taxi user subsidy schemes like the subsidies associated with the mobility allowance are demonstrating a strong latent demand for increased access amongst Australians with disabilities.

Public transport is potentially a cheaper alternative to taxi travel for people with disabilities in Metropolitan areas; however, significant problems in accessing services have been identified, indeed some 16 per cent of Australians with disabilities noted that it was not available or not known about in their area. Of those who did travel outside their homes, over 30 per cent said they had difficulty using public transport. Of those who had difficulties, 14 per cent said getting into or out of vehicles was a major issue (mainly step heights), 6.7 per cent noted difficulties in getting access to stops or stations, 4.4 per cent noted pain or discomfort while seated and 4 per cent noted lack of seating or standing difficulties as major challenges. A large range of other challenges were highlighted including fear and anxiety, difficulties in crowds or lack of space and cognitive difficulties (ABS 2003a).

TRANSPORT AND THE DISABILITY DISCRIMINATION ACT

Oliver and Barnes (1991) classified three areas of discrimination against people with disabilities: direct discrimination, indirect discrimination, and unequal burdens, and Mathews (2002) notes that 'all three types of discrimination are present in transport and their effects are to limit the mobility of disabled people and their access to the range of services and activities which contribute to quality of life' (Mathews 2002, p. 43).

> The Federal *Disability Discrimination Act 1992* (DDA) prohibits direct and indirect discrimination on the grounds of disability and makes it unlawful to discriminate on the grounds of disability in a wide range of areas including: sport, access to premises, accommodation, education, employment and the provision of goods, services and facilities (HREOC 2006).

Public transport plays a key role in the DDA and part of the act includes a series of standards relating to public transport, the Disability Standards for Accessible Public Transport (DSAPT).

> In recognition of the importance of public transport to people with disabilities, Parliament passed in October 2002 the Disability Standards for Public Transport under the Disability Discrimination Act, which outlines measures that transport operators and providers should take to make public transport more accessible (AIHW 2003, p. 45).

These standards provide transport operators and providers with certainty about their obligations under the DDA and if complied with, provide operators protection from a complaint or unlawful discrimination. According to the Attorney-General's Department:

> The Standards establish minimum accessibility requirements to be met by providers and operators of public transport conveyances, infrastructure and premises… The Standards set out requirements in relation to issues such as access paths, manoeuvring areas, ramps and boarding devices, allocated spaces, handrails, doorways, controls, symbols and signs, the payment of fares and the provision of information (Attorney-General's Department 2006).

Since 2002, all new public transport infrastructure and services must comply with these standards and existing infrastructure must be 'retro fitted' over a 20-year period from this date. There are interim progress requirements for most areas of the DSAPT of 25 per cent, 55 per cent, 90 per cent and 100 per cent by the end of 2007, 2012, 2017 and 2022 respectively. There are some exceptions to this such as waiting areas, signs and symbols, lighting, alarms, ticketing and information systems requiring to be fully compliant by 2007, while trains and trams have until 2032 to achieve the last 10 per cent of full compliance (DOI 2006a, p. 10).

No work has been undertaken to assess how compliance with these standards has acted to improve the mobility of Australians with disabilities however progress in this area is plausible and progress in infrastructure improvements have occurred. A review of the DDA in 2004 found that the number of Australians with disabilities using public transport had increased from 1.1M in 1981 to 3.3M in 1998, a 300 per cent increase in 17years (Productivity Commission 2004). However clearly this growth was not related to the DDA which commenced in 2002.

Major challenges have been found in retro-fitting existing infrastructure and there is some doubt that all public transport agencies will achieve there allotted compliance schedule. The costs of meeting the requirement of the DDA have been put at $3.8B (1999, Productivity Commission 2004) while the measurable economic benefits were valued at $1.4B).

Several commentators have also pointed out that providing access using public transport is a limited perspective. Austroads (1999) argued that reducing barriers to access requires a 'whole of journey approach'. This involves not simply focussing on implementing low floor buses and accessible bus stops, but rather focussing on the total trip, door to door, thus involving many different stakeholders, businesses and government departments. 'Accessible transport does not fit neatly into any single Council process or department because the 'whole of journey' concept crossed a number of disciplines' (Austroads 1999, p. 10). Whether this be designing estates so that low floor buses can negotiate the roads, upgrading areas around, not just at, bus stops, or ensuring that communication lines are open between government, private enterprise and the public.

In reviewing the UK's Disability Discrimination Act in regard to accessible public transport, Mathews (2002) cites a major problem in accountability given that transport infrastructure is treated separately from vehicles, so in the case of train access the responsibility for access is placed upon the train operator, and not the station operator. The Australian perspective is also problematic; is it the responsibility of the vehicle operator, the supplier or manufacturer of that vehicle, the local councils where the vehicle operates, the State governments or the Federal Government, the public or the individual to ensure that barriers to public transport for people with disabilities are removed?

ASSESSMENT

Transport is vital in enabling opportunities for people with disabilities to participate wholly in society, and quality of life indicators such as employment, social connectedness, civil and political rights, access to health, and education are severely restricted without such access. Access to public transport provides much sought after independence and autonomy and permits greater integration in society.

> Community integration is not only about where someone lives, but also about his or her relationship with the surrounding community. Without a way to get around, a person can remain isolated wherever he or she lives. Meaningful community integration therefore requires that a person have access to transportation that is both affordable and available for desired purposes (UPenn 2006).

A lack of access to transport would be severely limiting for anyone, but the consequences of limited mobility for people with disabilities are typically more severe, as much of their quality of life is dependent upon transport.

There has been a marked increase in travel by Australians with disabilities in the last 25 years (Productivity Commission 2004), and this is set to continue as mandates of the DDA come to fruition over the next 25 years. There is also much national and international evidence of latent demand for travel by people with disabilities (Fowkes et al. 1994; Harris and Tapsas 2006; Mathews 2002; PDCA 2004), and this is set to rise with an increasing ageing population (ABS 2004). The salient question is whether, or rather *how*, the transport system can cope with the increased demand for travel and fulfil the requirements of the DDA completely within the next 25 years. This is particularly pertinent for the public transport industry – there maybe an insatiable desire for public transport travel as the rest of the population migrate away from private car dependence – and whether there is sufficient funding and intent to support it. In the short to medium term there is likely to be a shortfall between capacity and demand for accessible transport unless a multi-disciplinary approach is taken that ensures accountability whilst involving the public, councils, government, vehicle designers/manufacturers, city and landscape architects, and of course people with disabilities. Such an approach maybe seen to be costly, but the costs of not doing so could be much higher.

Whilst there are significant financial subsidy implications in providing increased mobility and access to transport for Australians with disabilities, measuring the cost solely in financial terms is a limited, but often convenient, perspective. There is argument to support that 'on social welfare grounds, the benefits of removing barriers outweigh the costs of so doing' (Mathews 2002, p. 42). Indeed, there can be many on-benefits of making transport more universally accessible, after all, the access issues facing parents with pushchairs, tourists with luggage, cyclists, or shoppers with heavy bags, are not that dissimilar to those of wheelchair users. 'Dealing with transportation challenges can be beneficial to everyone and extends far beyond questions of civil 'right.' Improving the quality of public transportation in particular can be an effective solution to transportation concerns that effect society in general' (CFILC 2005).

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YOUNG AUSTRALIANS: NO WAY TO GO

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This chapter examines transport in the context of young Australians. It reviews the travel behaviour of young people in Australian, identifies their transport needs and problems, the problems these cause and highlights preferred measures aimed at alleviating transport disadvantage. The focus of the work is all Australians aged below 24 although most of the attention concerns those aged over 15 who require greater personal mobility due to the need for greater travel and independence as maturity develops.

YOUNG PEOPLE AND TRAVEL

GROWING UP, TRAVEL AND TRANSPORT

As young people move from the formative years to adolescence and then to adulthood a steady progression from dependence on parents to greater independence develops. In transport terms this progression is closely correlated with a need for greater mobility as the range of trip types and the distances travelled increases with age. Table 1 lists some of these changes.

A survey of young people and travel in the UK (Department for Transport 2006) identified the following conclusions about travel as young people grow:

- Until the age of about 10 both boys and girls demonstrate very similar travel habits. Travel is mainly as a passenger in a car (about 65 per cent of trips) with the rest mainly being walking trips (including push chairs for the very young).
- From about age 7 some changes in travel occur with the share of children saying they cross roads alone changing from 5 per cent at age 7 to 92 per cent at age 13.
- From the age of 10 when secondary school starts other changes in travel become apparent:
    - Car travel decreases and bus use increases
    - Boys in particular are more likely to start making trips by bicycle
    - Girls start making slightly more trips than boys; between the ages of 10 to 15 boys made about 7–8 per cent less trips than girls.
- Travel by other modes including rail and taxi become more significant from about the age of 16. At this age car travel also starts to increase as a share of travel because young people start to drive.
- The survey showed a small increase in the volume of travel between 0 and 3 years old but then a reduction at about year 4. From then onwards to age 18 there is a small trend towards increasing volume of travel with age.
- The majority of trips between 0 and 2 years are 'escort trips' travelling with parents to other activities. About 30 per cent of trips are for leisure.
- Between 4 and 13 years, education trip purposes are the most common (about 40 per cent of trips). Leisure activities represent about 30–40 per cent of travel with an increasing share

by age. Escort activities increasingly decline whilst shopping and personal business activities slowly increase with age.

- Around age 13 work trips start. This grows in share to about 20 per cent of trip purposes for women by the age 20 and 30 per cent for men. During the ages 13 to 20 education trip purposes decline as a share of all travel whilst leisure activities continues its growth in share. Overall leisure activities represent the highest share of travel in the late teen years. Shopping and personal business also increasingly represent a small but higher share of travel in the late teens.

Age Group	**Activities**	Parental Dependence	Personal Independence	Travel Needs – Distance and Volume
Pre-School	Play school, informal play with others	Very High	Very Low	Low
Upper Primary	School, informal play, some formalised sports, visit of an educational nature, hobbies and interests, parties			
Lower Secondary (pre-teens)	School, after-school activities, sports, outdoor recreation, youth clubs, visiting friends made at school, some peer groups activities and first possible employment			
Upper Secondary (mid-teens)	School, after-school activities, serious sports, outdoor recreation, youth clubs, specialist organisations in line with interests, staying over with friends, a greater range of part time employment.			
16 Plus	Further education. Apprenticeship, some full time employment, clubbing, dating, holidays without parents, full membership of sports/activity clubs/groups.			
18 Plus	Higher education/ university, part time and full time employment, clubbing, going to pubs, more dating and marriage, whole range of activities/ interests and entertainments.	Very Low	Very High	High

Table 1 Growing up; Travel and Independence (based on Community Transport Association 2002; Currie et al. 2005)

TRAVEL AND YOUNG PEOPLE IN AUSTRALIA

A range of Australian research has confirmed a similar set of trends in travel for young Australians (e.g. Morris et al. 1996). The research indicates important differences between urban, rural and regional contexts. A survey of young people in urban Australian contrasted travel behaviour in inner and urban fringe areas (Winter 1995). For those at secondary school and post secondary school travel mode to school and work were assessed (Figure 1).

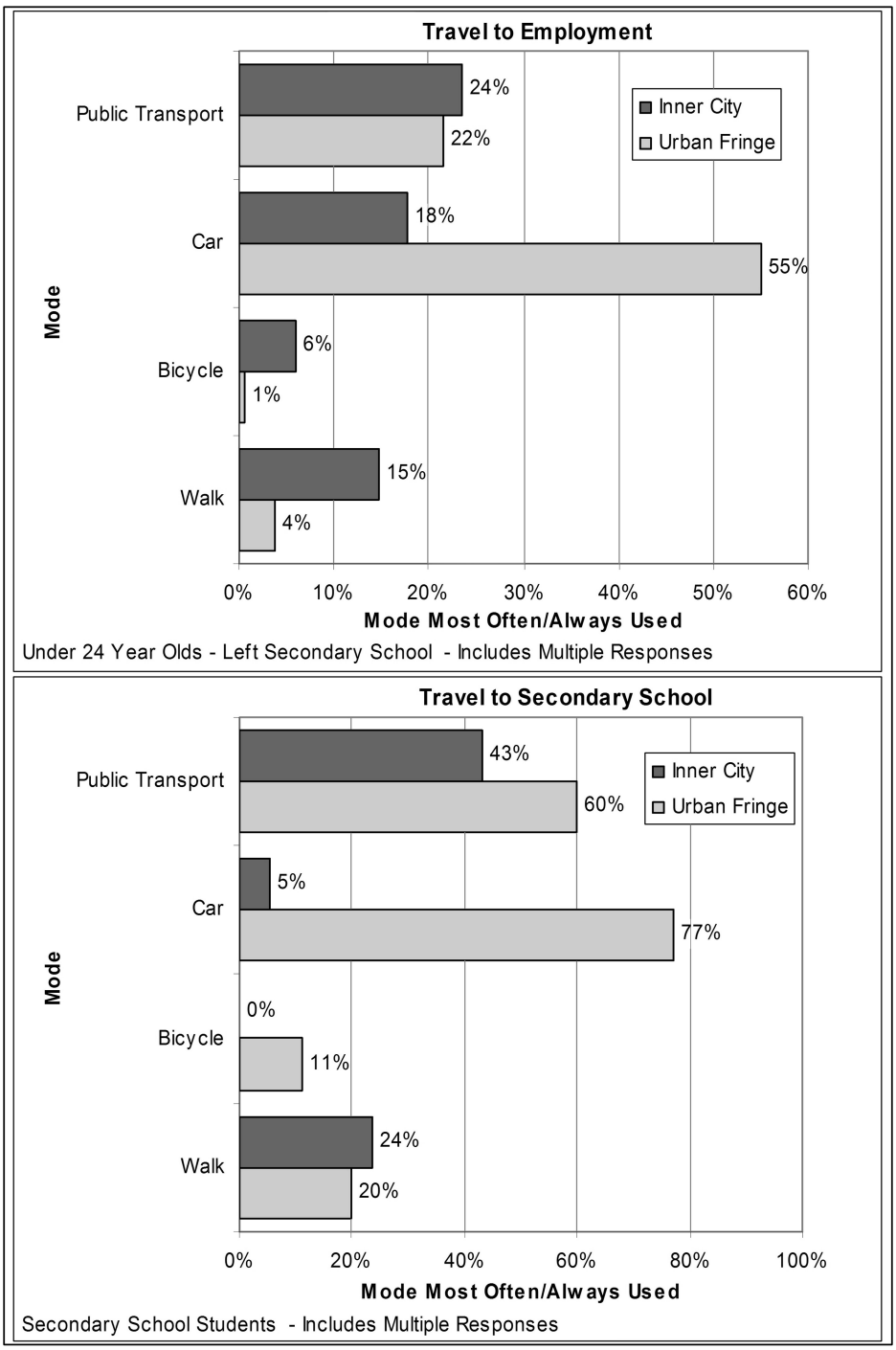

Figure 1 Mode used Frequently/Often – Urban Inner vs Fringe to School/Work (Analysis based on Winter, 1995)

This illustrated the significant gap in car dependence between young people in inner and urban fringe locations. This includes dependence on lifts as well as driving (for young people with access to cars). Walking, bike and public transport (for work) were more common in inner urban situations due to proximity and access to services. When public transport was available in fringe locations, such as for access to school, usage was significantly higher than for employment.

Figure 2 shows similar urban results for access to recreational activities and contrasts mode of travel from a recent survey of total (all purpose) regional travel in Eastern Victoria (LGCTWG 2007). The data from these sources is not directly compatible. For example the urban data is for entertainment only and concerns young people under 24, while the rural data is for all trips and young people aged between 7 and 12 years. Nevertheless with some careful interpretation some patterns emerge:

- Car dependence is again highlighted for entertainment travel on the urban fringe vs inner urban young people. However in this case even inner urban young people undertake a high share of car use in particular getting lifts, although public transport use remains the dominant form of travel.
- Car based travel is also dominant in regional and rural settings mainly lifts given by relatives.
- Walking is the next most significant mode particularly for large regional towns which have inner urban levels of walk access due to the relative proximity of facilities and services. As settlement size declines, walking becomes a smaller share of travel since access distances to activities are too long for a feasible walk.
- Public transport use in regional and rural areas is dominated by school buses. They represent the highest share of access for young people in local rural districts and also for small regional towns. Since school buses by definition only enable access to school, the high share of school bus use is indicative of limited availability of travel options in smaller regional towns and rural districts. Indeed it is suggestive of less total quantity of travel which is confirmed by the results of the regional surveys; about 20 per cent less travel was recorded in rural districts compared to large regional towns however sample sizes are small (LGCTWG 2007).
- Bicycle travel is an important mode of travel in all of the areas examined. There is some suggestion that bicycle usage is higher in larger towns however bike use in other centres is almost as high.

Overall car dependence and in particular getting lifts dominates travel in almost all Australian contexts for young people. This is confirmed by a range of other research (Khong 2003; Youth Network of Tasmania 2003; Currie et al. 2005). Other mode usage behaviour is suggestive of a strong preference for using alternatives to a lift (e.g. public transport, walk or bike) where they are feasible and available. There seems a strong association between this suggestion and the observation made earlier that the travel behaviour of young people is dominated by an increasing desire for independence as they grow to adulthood.

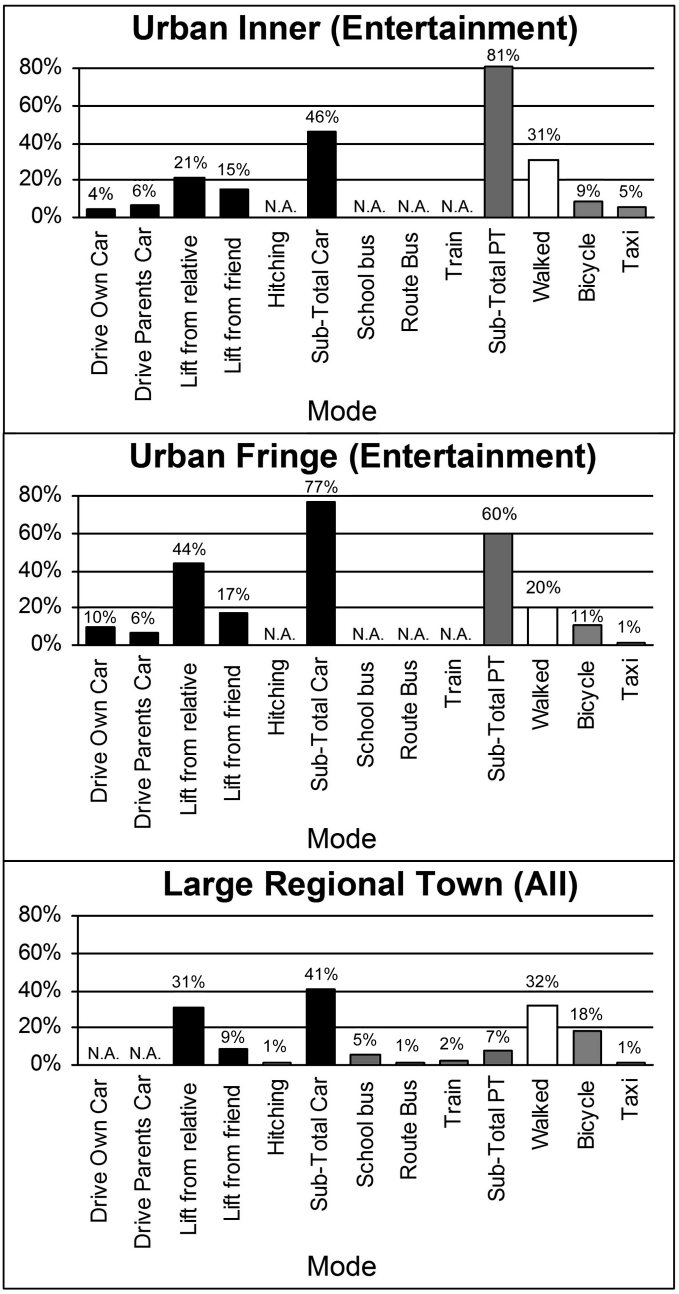

Figure 2 Young People and Travel Mode by Urban/Regional Contexts (Analysis based on Winter 1995 and LGCTWG 2007)
Note: Urban analysis based on Winter (1995). This concerns a sample of your people aged below 24 for entertainment trip purposes only. It also permits multiple responses and concerns the most frequently used modes. The regional and rural data are from LGCTWG (2007) and concerns young people aged 12–17 for all trip purposes. In this case the data shows share of all travel by mode over a two week period.

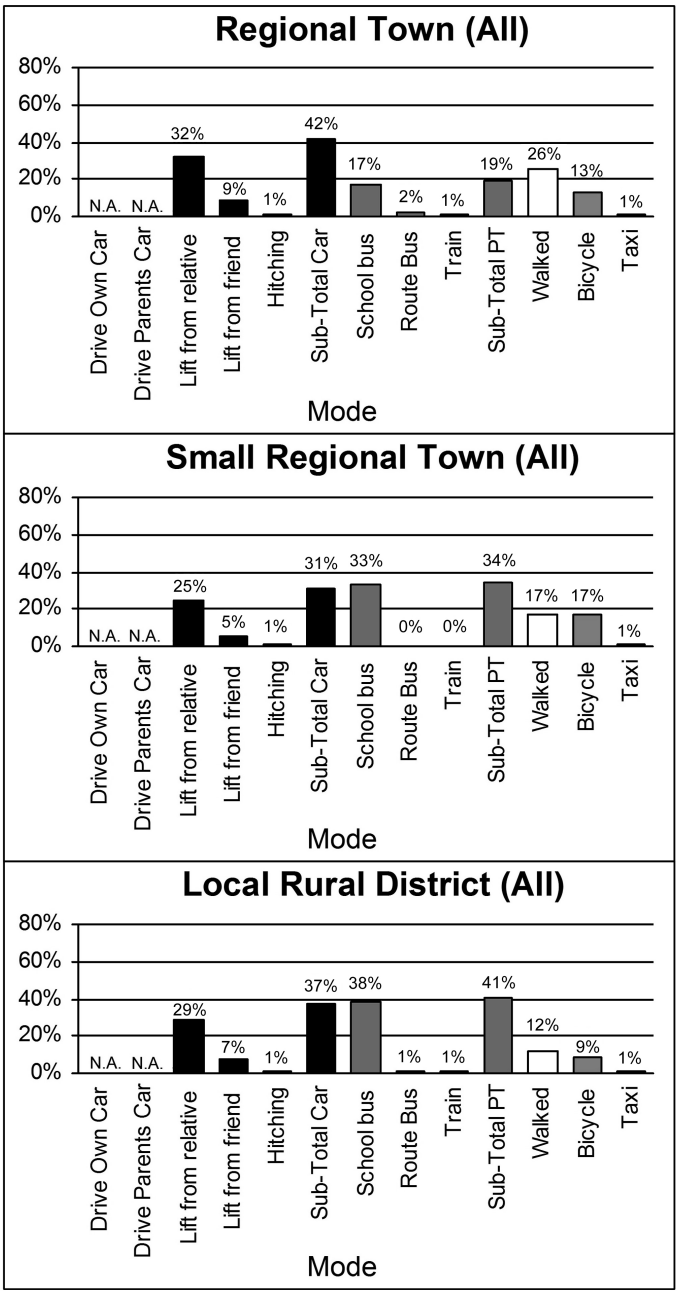

Figure 2 (cont'd) Young People and Travel Mode by Urban/Regional Contexts (Analysis based on Winter 1995 and LGCTWG 2007)
Note: Urban analysis based on Winter (1995). This concerns a sample of your people aged below 24 for entertainment trip purposes only. It also permits multiple responses and concerns the most frequently used modes. The regional and rural data are from LGCTWG (2007) and concerns young people aged 12–17 for all trip purposes. In this case the data shows share of all travel by mode over a two week period.

TRAVEL ISSUES AND YOUNG AUSTRALIANS

EXPRESSED TRAVEL NEEDS AND PROBLEMS

A wide range of evidence suggests transport problems are a significant issue for young Australians. A national survey of young people in rural and regional Australia (Currie et al. 2005) asked if there were local transport issues and problems; 96 per cent responded Yes. A similar national review of young people living in fringe urban Australia concluded that

> urban fringe young people are locationally disadvantaged, when compared with inner city young people, in that their living standards are adversely affected by spending more time travelling to post-secondary education institutions, being more likely to experience transport-related study problems; and by a lack of independent means of transport to and from entertainment venues (Winter 1995).

Table 2 synthesises the results of primary research from a number of transport need studies to identify the major transport issues and problems young people face with alternative travel modes used. The results shown order the problems identified by mode. Then each problem/issue identified is ranked by level of importance with the most important at the top. There is much consistency in the Australian based research findings even between urban, rural and regional settings (despite the differences in transport actually used between these settings). There is also evidence of much consistency between the Australian and the overseas findings (Storey and Brannen 2000).

Urban research focusing on young people and travel has tended to focus on the problems associated with public transport rather than other modes.

Getting lifts by car, the most important travel mode for young people, is a resounding concern in the rural context because it lacks independence and requires a reliance on others particularly parents. It is likely that similar issues affect urban contexts particularly the urban fringe.

A major concern with lifted access in rural areas is the distances involved. This can be very limiting for both parents as well as young passengers if travel takes several hours.

The cost of driving and driving and alcohol abuse have been highlighted as significant issues for young people in both urban and rural contexts. Alcohol abuse and the high rural youth motor accident rates have been linked e.g. in Tasmania 40 per cent of all road deaths were young people (Booz Allen Hamilton 2002). Several studies have found a strong acceptance and expectation that car driving is the only real choice for future mobility regardless of cost and safety concerns.

All studies have emphasised the need for and a lack of public transport as major transport concerns for young people. Low frequency, lack of spatial coverage and lack of night/weekend services are major common concerns in both urban and rural environments. Concerns regarding poor night and weekend public transport service levels correlate well with the need for access to leisure activities outside of school and work which generally occur at nights and weekends.

The cost of travel by public transport is a major concern of young people in both urban and regional contexts. Despite fare reductions for young people in terms of fare concessions in many states, it is often the long distances involved in travel which results in higher fares. Fare concession are not always the norm. In many rural contexts the only public transport services are tourist based services running on commercial fares. These can be particularly prohibitive as a means of

public transport in remote areas (e.g. BAH (Booz Allen Hamilton) and Acer Forester 1998). Some studies have also shown the mismatch between urban and fringe public transport fares. For example in Hobart, Tasmania fringe urban areas are dominated by socially disadvantaged groups who must pay commercial fares since Government subsidised buses only provide services to inner urban area residents (Currie 2004).

Personal security concerns, particularly at night are a major barrier to travel of young people in both rural and urban contexts. This is also a major concern of parents who can have a substantive influence over travel of particularly the younger teen age years (TRC 1994).

The feasibility of walking and cycling for long distance trips has been the major limitation of these modes for rural and urban fringe areas. Nevertheless, very long walks and bike trips have been noted in the literature (Travers Morgan 1988) with associated concerns for road safety and travel in hot/humid Australian climates.

Taxi travel remains a minor mode for young people although usage can be high particularly for entertainment based purposes at nights and weekends. Cost and availability of taxi services appear the major concerns. Community transport services are rarely identified as a travel option for young people with some young people perceived these as services focussed on the needs of older people (e.g. Currie et al. 2005).

Several studies have also highlighted feelings of isolation and lack of friendliness from members of the community when young people get together. This can be manifest as a problem in transport when bus drivers are unfriendly to young people because of they perceive young people as a cause of 'problem behaviour'.

Mode of Travel by Ranked Priority; Order of Issue Identified	**Primary Research Evidence Source**						
	Urban			**Rural/Regional**			
	Aust. (TRC 1994)	Aust. (Winter 1995)	Aust. (Hurni 2006)	Aust. Khong (2003)	Aust. YNOT (2003)	Aust. Currie et al. (2005)	UK Storey & Brannan (2000)
Lacks independence reliant on others limited availability				✓	✓	✓	✓
Causes unsafe reliance on hitchhiking						✓	
Long lift distances for parents unreasonable						✓	
Concern about low car owning households and need for lifts						✓	✓
Car Driving							
No choice but to get a car when old enough				✓	✓	✓	✓
Cost of driving is prohibitive	✓			✓	✓	✓	✓
Drinking and driving is common due to lack of options but driving	✓					✓	

Table 2 Synthesis of Research Evidence on the Transport Needs and Problems of Young People by Travel Mode and Context

Mode of Travel by Ranked Priority; Order of Issue Identified	Primary Research Evidence Source						
	Urban			Rural/Regional			
	Aust. (TRC 1994)	Aust. (Winter 1995)	Aust. (Hurni 2006)	Aust. Khong (2003)	Aust. YNOT (2003)	Aust. Currie et al. (2005)	UK Storey & Brannan (2000)
Public Transport							
Low Frequency / Not enough service	✓	✓	✓	✓	✓	✓	✓
Poor (spatial) coverage of services			✓	✓	✓	✓	
Lack of night and weekend services		✓	✓	✓	✓	✓	
High fares / costs of use	✓		✓	✓	✓	✓	✓
Poor information availability / awareness of services				✓	✓	✓	✓
Unfriendly (bus) driver and other passenger attitudes				✓	✓		✓
Personal security concerns on public transport (at night)	✓	✓	✓	✓	✓	✓	
Not accessible to disabled people						✓	
Walking							
Long distance travel is prohibitive			✓	✓	✓	✓	✓
Walking is dangerous on roads without paths							✓
Cycling							
Long distance travel is prohibitive				✓	✓		
No bike paths / dangerous on roads with a bike						✓	
Taxi							
Fares too high for travel			✓	✓	✓	✓	✓
Very few available				✓	✓	✓	✓
Community Transport							
Services not available / No access				✓	✓	✓	
Rarely focus on the needs of young people (mostly for the aged)						✓	✓

Table 2 (cont'd) Synthesis of Research Evidence on the Transport Needs and Problems of Young People by Travel Mode and Context

THE IMPACTS OF TRANSPORT ISSUES ON YOUNG PEOPLE

Much evidence links lack of transport to constraints on participation in activities. Some 63 per cent of young people in a survey in East Gippsland agreed with the view that lack of transport was stopping them doing things they wish to do. This compares to 61 per cent for a national

study of rural young people with a similar question. The East Gippsland study also demonstrated an increasingly higher share of young people agreeing with this point as settlement size declines; 82 per cent of young people in smaller local districts identified restrictions on activities as a result of transport compared to 55 per cent in larger regional towns. There is a strong correlation between this and the lower trip making displayed in smaller settlements; young people in local rural districts displayed 20 per cent less trips than those in large regional towns (LGCTWG 2007).

There is some disagreement amongst studies concerning the major activities for which participation is being restricted:

- Respondents in the national rural youth survey (Currie et al. 2005) highlighted restricted access to 'education and employment' and 'social opportunities' as the major concerns with similar levels of priority between the two. Access to medical and general services were also highlighted but as 'lower order' concerns.
- Prevention of access to recreation and social activities were highlighted in 'open ended' responses to the youth survey in East Gippsland.
- In urban fringe contexts (Winter 1995) identifies access to education, employment and recreation as the major issues although priorities between these are unclear.

Overall it is clear that access to education, employment and social and recreational activities are the major areas of limitation as a result of transport issues however relative priorities between these are unclear. Of these potential constraints on education and employment participation are clearly of greater economic concern.

ACCESS TO EDUCATION

There are strong indications that educational participation rates are significantly lower for fringe urban and rural Australia and that transport issues and problems play a major role in influencing this issue:

- In rural and regional Australia:
    - Young people (aged 18–25) demonstrate significantly lower participation rates (23 per cent) in higher education than urban residents (39 per cent) (Currie et al. 2005).
    - LGCTWG (2007) asked a sample of young people in rural and regional areas what factors impacts on their decision to undertake post secondary education. Owning a car was considered the single most significant factor. The share of young people noting this issue increased in smaller more remote settlements but was highest of all factors in all settlements including larger regional towns.
    - The national survey of rural young people asked them to identify which activities were limited as a result of transport problems. The most commonly identified impact was restricted access to education and employment.

- In fringe urban Australia:

    - Winter (1995) demonstrated lower participation rates in post secondary and secondary education for young people living in fringe areas vs the inner city.
    - The same study noted stronger levels of dissatisfaction with travel to post secondary courses (39 per cent) compared to young inner city residents (14 per cent). It also identified that 19 per cent of young people living in fringe urban areas identified transport problems as a reason for not undertaking their preferred secondary course. This compared with about 5 per cent in inner urban areas.

ACCESS TO EMPLOYMENT

Links between restricted access to employment and lack of transport are less clear due to complex effects of access and desires to participate in education. Full time employment rates are higher for young people living in urban fringe Australia compared to inner urban Australia (Winter 1995). This is explained by differing priorities of young people living in fringe vs inner urban areas. Some 54 per cent of young people on the fringe stated that they left secondary school because they wanted to start earning money compared to 27 per cent of those living in inner urban areas (Winter 1995). The same study noted a statistically significant relation between the level of education of parents and participation in post secondary education for fringe urban dwellers. Fringe urban young people who had fathers with blue collar jobs also tended to not participation in post secondary education.

Overall this evidence suggests that participation in post secondary education and employment are related i.e. high rates of education participation generate low employment rates and vice versa. Education participation is strongly related to family income which is generally lower in fringe than in inner urban areas (Winter 1995).

Part time employment rates are lower in fringe urban areas; they represent 58 per cent of jobs in fringe Australia compared to 74 per cent in inner areas. This could be related to the availability of jobs as well as transport issues.

Overall it is clear that employment opportunities are restricted because of transport problems in particularly fringe urban contexts, however the degree of this influence on employment is unclear. Winter (1995) concluded that 'there is a slight locational disadvantage for urban fringe young people in terms of getting to paid employment'. Employment participation rates of young people are higher but this may be due to parental influences, personal preferences as well as transport issues associated with access to education. This is not to say that transport to work is not considered to be more onerous in fringe areas than in inner urban areas:

- 7 per cent of fringe urban young people noted dissatisfaction with transport to work compared to zero per cent of inner urban young people
- 10 per cent of young people on the urban fringe had travel times over 60 minutes compared with zero per cent of inner urban young people (Winter 1995).

Qualitative evidence from urban fringe Sydney demonstrates the transport problems associated with access to training and job interviews for young people (Hurni 2006). This evidence is also illustrative of a desire for travel related to employment related activities which is being frustrated. What is unclear is the extent to which employment is being restricted.

The link between restricted employment participation and lack of transport is clearer in rural and regional contexts. Youth unemployment rates are higher in rural compared to urban contexts and restricted access to employment was the major concern related to transport noted in the national survey on rural and regional young people (Currie et al. 2005). Some submission to this study noted cases of employer discrimination for potential work candidates living in areas with poor access. This was related to poor employee time keeping caused by lack of transport in these areas. Another study in Tasmania (Booz Allen Hamilton 2002) noted the unfortunate situation where young people living in regional centres needed a job whilst farmers in remoter locations needed workers to assist in the harvest. Transport access was the major barrier to solving these problems.

ACCESS TO RECREATIONAL/SOCIAL ACTIVITIES

A series of studies have highlighted links between lack of transport and limited recreational and social activities (Winter 1995; SWDC 2000; Youth Network of Tasmania 2003). Leisure related activities of this kind are the most common purpose of travel for young people in later teen years (see earlier).

ABS (1996) identified people in NSW who were unable to attend recreational events due to transport problems. Overall, 6.7 per cent of all ages identified issues of this kind but 8.3 per cent of women aged between 18 and 24 highlighted this issue. Men in the same age bracket noted this issue on only 4.2 per cent of occasions.

In rural East Gippsland 50 per cent of the 'open ended' comments made regarding activities which were prevented due to lack of transport concerned visiting friends, going out (e.g. to parties) and sporting activities.

Much anecdotal evidence was collected on similar concerns in urban fringe contexts in Western Sydney (Hurni 2006). This study noted cases where access to team sports was considered impossible without access to a car. Shared rides and parents acting as unpaid 'taxi drivers' are a major feature of Australian local sports clubs at weekends.

Fringe urban Australia is again highlighted as the focus of the urban transport problem for young people. Over twice as many fringe young people (28 per cent) said entertainment access was limited close to home compared to 12 per cent in the inner city (Winter 1995).

TRAVEL SOLUTIONS AND YOUNG AUSTRALIANS

Improved public transport is the single most common expressed solution from young people when asked about transport solutions to their problems (Winter 1995; Booz Allen Hamilton 2002; Currie et al. 2005; Hurni 2006; LGCTWG 2007). Even in rural areas, where the viability of public transport services can be marginal, a strong preference towards providing bus and rail is common (Currie et al. 2005; LGCTWG 2007). The major driver of these preferences appears to be a desire for independent travel i.e. where young people can make their own choices about how, when and where to travel as opposed to relying on parents for lifts.

The major improvements suggested to public transport are also generally similar between urban fringe and rural contexts:

- Improved spatial coverage
- Improved frequency of service
- Improved services at nights and weekends.

A feature of expressed need in more remote regional centres has been specific suggestions for bus services to special events and activities (Currie et al. 2005; LGCTWG 2007). This has led to specialist community bus based services such as the 'Runaway Bus' in Western Australia.

There is an interesting contrast between the expressed needs for public transport and the expectations of young people that owning a car is the only 'real' solution to transport needs. Several studies have noted this dilemma in rural contexts (Currie et al. 2005; LGCTWG 2007). However it may be reasonable to extent this concern to fringe urban Australia. It is indicative of some scepticism on the part of young people regarding the ability of authorities to provide public transport solutions. Nevertheless a strong preference towards public transport solutions is clear.

A range of non-public transport solutions have also been expressed by young people particularly in rural and regional contexts. In Tasmania a preference for better use of community buses in terms of funding and coordination was the most highly supported measure amongst community leaders involved in youth support groups (Booz Allen Hamilton 2002). Shared ride schemes and Taxi based schemes including fare vouchers, sharing and subsidies are common in most rural studies (Booz Allen Hamilton 2002; LGCTWG 2007). These studies also suggest better bicycle routes and the outreach of services into communities however these options tend to be at the less supported end of the range of responses from young people.

CONCLUSION

Overall it is clear that transport issues are a major concern of young people. A common theme amongst this discussion has been the desire for greater independence as young people grow and the expanding nature of their mobility horizons during this process. Early youth is characterised with dependence on parents and a focus on school based travel. In mid to late teens independence, leisure and social activities dominate travel. The share of young people noting transport and access problems in fringe urban and rural and regional Australia is high. The major concerns are reliance on relatives for lifted travel and lack of independence due to limited public transport services. The major impacts of transport problems are restrictions on education and work activities and limited social and recreational activities. Young people seek transport solutions which will provide them with independent mobility and which will release them from the constraints imposed by relying on parents for lifts. Nevertheless, dependence on parents suggests there are links between the mobility constraints of parents and those of young people. Improving public transport is the most common solution suggested by young people to achieve their objectives. Many of the issues identified in this chapter are common between fringe urban and rural contexts however there is some suggestions that the more remote the location the more significant the scale of the access problems identified.

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INDIGENOUS COMMUNITIES

TRANSPORT DISADVANTAGE AND ABORIGINAL COMMUNITIES

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This chapter provides a review of transport disadvantage in the context of Indigenous Australians with a more specific focus on remote Australia. It identifies transport related disadvantages associated with Indigenous communities, discusses travel behaviour pattens and identifies transport needs and problems. It discusses Aboriginal issues of disadvantage generally and how these affect access to transport. It identifies issues of Aboriginal transport disadvantage relating to life in remote regions, the importance of the motor vehicle in Aboriginal life, issues regarding access to motor vehicles, the importance of culture and the appropriateness of existing services with regard to Indigenous Australians.

From a literature review of sources pertaining to transport disadvantage, Dodson et al. (2004) noted nine particular groups that are more likely to experience transport disadvantage or transport related social exclusion than others. They were:

- Low-income people
- The unemployed
- Beneficiaries
- Youth/Children
- Women
- Elderly
- Disabled
- Outer-urban dwellers
- Ethnic minorities (Dodson et al. 2004, p. 26)

It is a sad fact that many members of Australia's Indigenous communities fit into one or more of these categories and hence the transport disadvantage experienced by these communities is often of the highest level.

DISADVANTAGE, TRAVEL AND INDIGENOUS AUSTRALIA

Australia's Indigenous communities are commonly located in fringe urban areas, or outer regional/remote Australia; Figure 1. These areas are characterised by isolation in terms of access to facilities and services and a lack of transport options for those without access to a car (Dodson et al. 2004). Isolation is not limited to remote regions. A recent report by the NSW Aboriginal Transport Network (2006) notes that 'Isolation from services can also occur in an urban setting – for example public transport services can be very poor in the Mt Druitt/Blacktown region in Sydney (one of the largest Aboriginal communities in NSW)'.

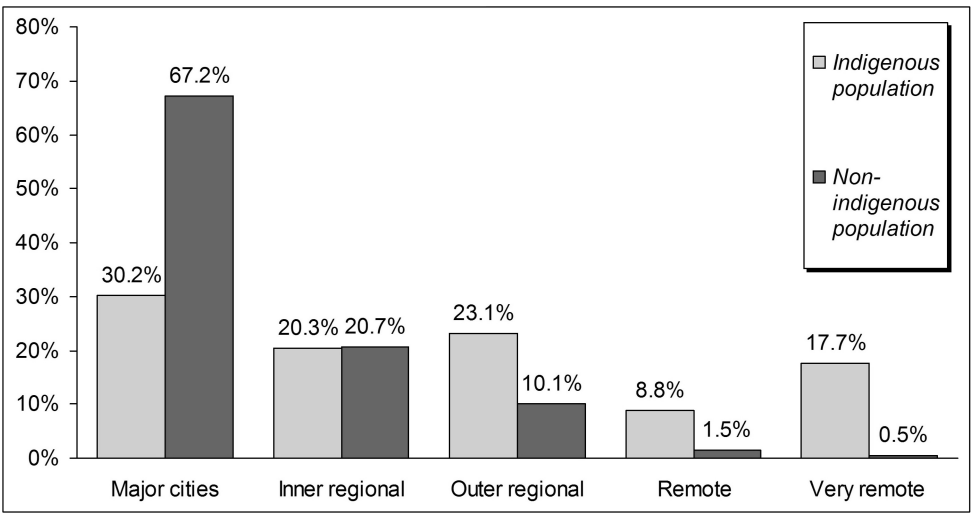

Figure 1 Location of population by remoteness area (ABS 2001, p. 22)

The report noted the role of history in the creation of this physical isolation:

> Some of the transport issues faced by Aboriginal communities are historical in nature, and trace back to the segregation of Aboriginal communities that began in the mid to late 19th century. These laws dislocated Aboriginal people from jobs and services, often expressly forbidding ATSI communities from taking these opportunities. As a result geographic isolation (and thus transport problems) was created, shifting Aboriginal communities away from services, employment and training (NSW Aboriginal Transport Network 2006).

Finlayson and Auld (1999) highlight a further example of physical isolation in their study of Aboriginal communities in and around Kuranda near Cairns, Queensland. Here they found the vast majority of transport services in the area being catered towards day trippers, servicing the tourist market, and as such being unsuitable for the Aboriginal population living in and around the area. They argue that this lack of transport leads to feelings of isolation despite them being relatively close to Cairns, 'The transport and access issues in Kuranda result, first, in many Indigenous people feeling the impact of their isolated location and the limitations this imposes on their ability to access mainstream urban services and facilities, and, secondly, lack of access leads to feelings of isolation and marginality' (Finlayson and Auld 1999, p. 13). This is further exasperated by government classification of areas and people not being transport conscious, 'Aboriginal people see Kuranda as a remote location in terms of access issues, but for the purposes of government service provision the area is considered 'urban' and fails to attract any special consideration for service delivery' (Finlayson and Auld 1999, p. 12).

Transportation is often an issue in areas separated by distance or in areas of low population density and it would seem that a significant share of the Indigenous population suffer because of this. The transport problems associated with physical isolation serve to increase other issues of disadvantaged faced by Indigenous communities, 'the issue of adequate transportation is

magnified for Indigenous people in these [remote] areas because of their low socioeconomic status, the large distances, poor roads and relatively low access to vehicles' (Holcombe 2006, p. 183).

Health issues are a great concern in Indigenous communities and transport problems are part of this problem. Jones highlights areas in which the Indigenous community are at greater risk than Non-Indigenous peoples:

> notably, the 20-year gap in life expectancy at birth, 56 years for Indigenous males and 63 for females, compared with 76 years for all Australian males and 82 for females, in 1997–99; age specific death rates more than five times the Australian rate at ages 35–54, in the case of both males and females; reported rate of diabetes among Indigenous people aged 25–55 living in non-remote areas 7–8 times higher then for Non-Indigenous people (Jones 2004, p. 118).

These are issues that alone are most difficult to solve, however transport issues for Indigenous populations only serve to compound these issues:

> Frequently there is poor coordination between local, public and community transport providers, which can either make existing services difficult to use, or fail to take opportunities to share resources in order to solve community problems. The long travelling times mean that many people who do not have access to a motor vehicle are discouraged from attending medical appointments. Better coordination of services can help to improve links to vital services (NSW Aboriginal Transport Network 2006).

Meanwhile the 2002 National Aboriginal and Torres Strait Islander Social Survey (NATISS) highlights the over representation of Indigenous peoples on a low income, unemployed and beneficiaries (Table 1). It shows lower levels of higher education amongst Indigenous peoples versus Non-Indigenous peoples, an over representation among the lower quintiles of income earners, higher rates of rental and government housing occupation and lower levels of full time employment.

Indigenous communities are also significantly over represented in instances of car trauma. Brice (2000) in a report on Australian Indigenous road safety wrote 'the evidence indicates that after taking into account the relative sizes of each population, Indigenous Australians are dying from road trauma at approximately three times the rate of Non-Indigenous Australians'.

It can be seen that Australia's Indigenous population face significant hurdles in general society that affect their access to transport. As a population they check a majority of boxes of transport disadvantage groups as previously identified by Dodson et al. (2004). These issues clearly cannot be completely attributed to poor transport services, but they are indicators of a population that significantly suffers a transport disadvantage.

		Indigenous (%)	Non-Indigenous (%)
Higher education	Achieved Bachelor degree or above	3.7	16.9
	Achieved Certificate or Diploma	24.1	32.7
Income	Equivalised gross household income		
	Second and third deciles	37.5	19.8
	Lowest quintile	41.7	19.3
	Second quintile	28.3	18.6
	Third quintile	14.4	19.0
	Fourth quintile	9.2	19.9
	Highest quintile	6.4	23.1
	Main current source of personal income		
	Government pensions and allowances	51.7	27.1
Housing	Household tenure type		
	Owner		
	Owner without a mortgage	10.0	38.5
	Owner with a mortgage	16.5	34.6
	Renter		
	State or Territory Housing Authority	21.2	3.8
	Indigenous Housing Organisation/Community housing	24.5	0.6
	Other landlord types	23.9	19.9
	Total renters	69.6	24.3
Employment	Labour force status		
	Employed		
	Full-time	23.6	45.2
	Part-time	19.0	18.3
	Total employed	42.7	63.5
	Unemployed	9.4	3.7
	Not in the labour force	47.9	32.8
Law and justice	Victim of physical or threatened violence in last 12 months	19.5	8.9
Information technology	Used computer at home in last 12 months	43.5	67.6
	Accessed Internet at home in last 12 months	30.4	57.9

Table 1 Selected comparative statistics of Indigenous and Non-Indigenous populations (ABS 2002)

THE IMPORTANCE OF THE MOTOR VEHICLE

Remote communities rely heavily upon existing transport resources. Existing resources and services in remote Aboriginal communities' are heavily used and hence quickly consumed, and vehicles are no exception to this. The average car in a remote Aboriginal community has an extremely short lifespan. Gerrard (1989) in noting a mechanic's thoughts in Arnhem Land stated that vehicles in the area 'developed serious mechanical problems within six months and that the average

lifespan of Aboriginal cars – which received much less maintenance that European ones and were driven far harder – did not exceed two and a half years'.

This rapid consumption of vehicle resources however cannot simply be apportioned to neglect. Due to reasons of affordability and access a large number of private cars acquired by Aboriginals in remote communities are second hand, or as Young states:

> The cars that Aboriginal people in the Western Desert buy are typically in the last stages of their viable life'. Coupled with this is the fact that these vehicles operate over long distances and in harsh conditions, 'Some sedans and four-wheel-drive vehicles as well, last only a few months before irretrievable break-down occurs on the punishing dirt roadways (Young 2001, p. 38).

Nonetheless cars have become ingrained into the way of life in remote Indigenous communities. Fogarty (2005) argues that in vast tracts of the nation's north 'Toyota is King', in these areas 'the word "truck" evokes expressions of autonomy, notions of collectivity, intercultural frustration and seemingly random acts of extreme violence'. In remote regions of the Northern Territory there is seemingly no use the car cannot be put to:

> People use the car primarily for hunting, shopping, ceremonial travel, visiting family in hospital and jail. The car is a sign of prestige and privilege. The car is also a mobile home and private bedroom; blankets and mattress are stored on seats, doubling as seat covers. Often a gun is placed under the front seats and game is shot from the side window (Stotz 2001, p. 225).

Curiously the car acts as a vehicle to access both 'whitefella' and Indigenous cultures for Indigenous populations.

Much evidence suggests that cars in aboriginal communities are heavily used and highly valued. Gerrard gives the example of people needing to travel quickly, for 'the teaching assistant visiting an outstation over the weekend to be back at work on Monday morning, that the woman visiting the store or clinic reached it within opening hours, or that the man travelling to Darwin by plane be at the airstrip by a certain time' (Gerrard 1989, p. 101). Fogarty notes that the community vehicle 'Truck Five' in Arnhem Land 'was literally the intercultural vehicle through which this distinctly Indigenous domain did business with the main township. It brought supplies of food from family in town, mail, medical supplies from the clinic, various forms of cheques and payments and a constant stream of *djurra* [paperwork] that needed attention' (Fogarty 2005, p. 1). While also noting that the truck played an important part in community relations:

> Truck Five created a space and reason for community members to engage with the *balanda* world and indeed with whitefella education. Although, like all parents, members of the outstations wished the best for their children, the school truck provided an immediate reason to encourage participation in an education that at times must have seemed somewhat pointless (Fogarty 2005, p. 4).

Equally the motor vehicle allows Indigenous populations to maintain their culture, Young writes, 'cars mediate, not only, the constant dynamic of social relations but also, crucially, the strong emotional relationship of people with country' (Young 2001, p. 52). Communities are very

spread out in remote regions and travel between them is very important for business and social reasons. The tyranny of distance is sharply felt in remote areas:

> Without access to a reliable vehicle, people cannot now reside on homelands or in outstations, which limits their participation in customary economy and land management activities. 'Looking after country', ceremonially and through foraging, fire regimes and other land use and management activities, requires living on country, and today people will say this is not possible without access to a vehicle (Holcombe 2006, p. 185).

Coupled with this is the fact that outstation life deals in distances only navigable by motorised transport, thus creating an Aboriginal dependence upon motor transport. And like in so many other cultures and scenarios the car provides a means of freedom or escape.

> Access to motor vehicles is indispensable for fulfilling social obligations and enhancing political status. At the same time, mobility is a means to avoid social conflict, often cited by bush people in their desire to live and move in smaller family units on homelands more similar to those of the past/*iriti* before white people came (Young 2001, p. 37).

VEHICLE ACCESS

Given the importance of the motor vehicle in remote Indigenous communities it is unsurprising that issues of access to them can be hotly contested. Access issues are further exasperated by chronic vehicle shortages, 'Vehicles are a dynamic resource, flowing into and out of remote settlements at a far greater rate than non-remote areas' (Holcombe 2006, p. 187). As such all types of strategies are used to gain a greater/faster access to a vehicle. 'Stories about demands on vehicles abound in Indigenous community governance, as access to transport is clearly both a highly valued and a very scarce resource, particularly in remote Indigenous communities' (Sanders 2006, p. 8).

The ABS 2002 NATISS stated that only 47.5 per cent of Indigenous people in remote populations have access to a motor vehicle to drive (Table 2). Holcombe meanwhile states that anthropological research suggests that the ABS data drastically inflates real access in remote regions, writing 'These figures all suggest approximately 5–10 per cent of the Indigenous population having access to a vehicle 'to drive' at any given time' (Holcombe 2006, p. 186). Whatever the real figure may be it can be seen that access to vehicles is of great concern to Indigenous populations compared to access rates of Non-Indigenous peoples. This is not only a concern in remote regions, as populations in non-remote regions also suffer from lower access rates than their Non-Indigenous counterparts. The NATISS data also shows that Indigenous females have lower access rates to vehicles than males, while Gerrard notes in some communities 'access to Aboriginal-owned vehicles was strictly limited by clan and family affiliation' (Gerrard 1989, p. 101).

	Indigenous		All regions		All regions - Indigenous	
	Remote (%)	Non-remote (%)	Indigenous (%)	Non-Indigenous (%)	Male (%)	Female (%)
Motor vehicle access						
Has access to motor vehicle/s to drive	47.5	64.4	59.7	85.2	59.0	50.6
Difficulty with transport						
Can easily get to the places needed	65.2	73.5	71.2	84.4	71.3	69.0
Cannot, or often has difficulty, getting to the places needed	16.4	9.8	11.6	3.6	11.6	11.7

Table 2 Access to transport (ABS 2002)

A further dilemma facing Indigenous communities in remote areas is in regards to the use of 'community' vehicles. After public criticism in the 1990s on government expenditure on vehicles for remote communities, a large number of vehicles purchased for these communities are today provided subject to specific conditions.

> The vehicles now purchased via government funds tend to be driven only for specific purposes, such as aged care support or community policing. They are not freely available for general purposes, such as visiting the nearest service centre, for shopping, banking etc. Such vehicles also tend to be monopolised by certain individuals and are not shared across the settlement 'community'… The focus on private and 'community-owned' vehicles also underlines the lack of public transport options in very remote regions (Holcombe 2006, p. 185–6).

From this develops large networks of car sharing, lift taking and lift providing that creates great strains on communities and car owners. Due to low car ownership levels and limited transport access great pressure is placed upon existing services and those who do have cars. A Travers Morgan report noted this in Alice Springs, 'This pressure to provide transport was said to contribute to inefficient use of staff time and resources and is a source of continual conflict, particularly when drivers refuse to carry the passenger(s). However it is often difficult for drivers to refuse, knowing that a taxi is the only other alternative' (Travers Morgan 1988, p. 38).

HIGH COST OF VEHICLES

A further constraint on vehicle access for Indigenous communities is their cost. As shown in Table 1 many Indigenous peoples are of lower income brackets thus restricting their access to a motor vehicle, however other factors also add to this cost barrier.

Indigenous communities, especially in remote regions have been found to spend a greater proportion of their income on car related costs. Lawrence 1991 notes some of the reasons for this:

> Aboriginal people have a greater reliance on non-public transport, live for the most part in far remoter regions and consequently consume larger amounts of fuel. These added costs significantly affect both individual and community financial assets. Furthermore, sheer distance and the condition of unmaintained roads exact a further toll on vehicle expenditure. Personal and commercial vehicles require more fuel because of distance and subsequently require more maintenance due to rough road conditions.

Perhaps due to this vehicle reliance Crough and Pritchard 1991 noted that Aboriginals were inequitably charged for motor vehicle taxes. They suggested that in an area of Central Australia, of whom the population was overwhelmingly Aboriginal, each resident contributed an average of $151 per annum to governments in the form of petrol taxation. 'Considering that average incomes in these areas are appallingly low, it is essential that this cost be taken into account when policies are made regarding these people' (Crough and Pritchard 1991, p. 39). This, in addition to the extra expenses of general goods due to increased transportation costs in remote areas, shows that Indigenous peoples in remote areas face many transport related disadvantages.

IMPORTANCE OF CULTURE

An issue of great importance in regards to Indigenous transport disadvantage is the provision of culturally appropriate transport services.

Connection to homelands and extended kinship networks is a vital aspect of Aboriginal life and access to transport is a key to maintaining this connection. Table 3 shows that participation and attendance at events and homelands is at a high level for Indigenous peoples living in both remote and non-remote regions. Pollack, in a study of Aboriginal transport disadvantage in urban areas, highlighted the importance of transport options in maintaining these links: 'This research found that many Aboriginal people living in an urban environment have transport needs for cultural activity and kinship obligation' (Pollack 2001, p. 342). Young, meanwhile, argues that 'One of the most pressing reasons to gain access to cars for men and women alike is for the production of religious ceremonies' (Young 2001, p. 44).

Cultural obligations are often given priority over work and education commitments by Indigenous peoples. These cultural commitments are mobility dependent; they can only be conducted if the cultural venue can be reached. Issues transport planners face in servicing the needs of urban Indigenous populations in this respect is the provision of transport that crosses the rural-urban divide and dealing with the unpredictable nature of their timing. The effect of cultural commitments on urban Indigenous populations mean their 'travel priorities do not fit neatly into a mainstream transport system, as they are multifaceted and link urban and rural locations' (Pollack 2001, p. 342).

Pollack concludes by saying that 'Government agencies and policy makers must consider this area of transport disadvantage so that restricted access to mobility is not a barrier to cultural survival for Aboriginal people living in an urban environment' (Pollack 2001, p. 345).

		Remote (%)	Non-remote (%)	Total (%)
Recognition of and access to homelands / traditional country	**Recognises homelands / traditional country**			
	Living there now	38.0	15.8	21.9
	Not living there now			
	Allowed to visit traditional country	46.9	45.9	46.2
	Not allowed to visit traditional country	0.6	0.5	0.5
	Total not living on homelands/traditional country	47.8	47.7	47.7
	Total recognises homelands/traditional country	85.8	63.4	69.6
	Does not recognise homelands/traditional country	14.2	36.6	30.4
Attendance at cultural events in last 12 months	**Attended cultural event(s)**			
	Funeral	74.1	36.3	46.6
	Ceremony	45.0	15.5	23.5
	Sports carnival	52.8	21.2	29.8
	Festival/carnival involving arts, craft, music or dance	41.7	33.5	35.7
	Involved with Aboriginal/Torres Strait Islander organisation	24.9	26.5	26.1
	Total attended cultural event(s) in last 12 months	87.1	60.9	68.1
	No attendance at cultural events reported	12.6	39.1	31.8
Participation / payment in cultural event(s) in last 12 months	**Participated**			
	Participated for payment	12.1	6.0	7.7
	Participated without payment	18.2	20.3	19.7
	Total participated	30.2	26.3	27.4
	No participation reported	69.8	73.7	72.6

Table 3 Cultural connectivity (ABS 2002)

CULTURAL BARRIERS

The cultural distinctiveness of Australia's Indigenous populations highlights the need for culturally appropriate services to be provided or catered for in Indigenous communities. A report to the Northern Territory Department of Transport and Works into public transport noted the different type of services required by Aboriginal people of the Territory. This included transport over long distances and 'It was also noted that bus services may be unsuited to many Indigenous groups since they often needed door to door travel and found timetables difficult to understand and time and scheduling activities in time a difficult concept to understand given their cultural background' (BAH 1998, p. 29).

A further extension of this theme is the notion that some members of Indigenous communities do not understand the 'rules' of public transport use. Stemming from inability to read or compre-

hend timetables through to issues of cultural conflict. A Travers Morgan study into public transport in Alice Springs undertook consultations with the community that raised this issue. The report wrote, 'There were frequent and conflicting comments that town campers had scared off or offended the elderly or mothers with children through their unruly behaviour, drunkenness or lack of hygiene or, alternatively, that Aborigines would not catch a bus used by white residents' (Travers Morgan 1988, p. 34).

Equally Travers Morgan reported incidences of discrimination against Aboriginal users in the use of and access to the town's taxi service. Aboriginal users reported incidences of being overcharged, being subject to offensive behaviour from taxi drivers and incidences of taxi no shows after booking (Travers Morgan 1988, p. 35).

These concerns regarding culturally appropriate services for Indigenous populations are important and delicate issues. BAH (1998) identified five basic needs of the Indigenous community in its study of public transport in the Northern Territory, and proposed strategy measures to address these needs (Table 4).

Need	Bus services	Taxi	Minibus	Community Transport
Prefer door to door travel	Set and enforce route coverage standards. Examine door to door public transport	Maintain door to door services	Maintain door to door services	
Need group travel including children	Consider group travel ticketing	Encourage group travel in taxis	Encourage appropriate group travel in minibuses	Encourage better use of community vehicles
Need for low fares	Maintain fare Concessions. Ensure targeted subsidies. Coordinate subsidies with Indigenous service providers	Coordinate subsidies with Indigenous service providers. Assure reasonable group fare rates	Coordinate subsidies with Indigenous service providers. Assure reasonable group fare rates	Maintain no fares principle
Don't understand transport, how to use or what the rules are	Provide an education officer for all modes to communicate ideas	Provide an education officer for all modes to communicate ideas	Provide an education officer for all modes to communicate ideas	Provide an education officer for all modes to communicate ideas
Need demand responsive not scheduled services	Encourage use of non-scheduled services. Examine responsive, door to door public transport			

Table 4 Strategy measures to address Indigenous transport needs (BAH 1998, p. 44)

It should not be assumed that Indigenous communities require the same type of services as Non-Indigenous peoples. Like any transport service the needs of the population that are to use it need to be understood and catered for, both so that the service is utilised and so it is efficient to run.

CONCLUSION

Many of the issues raised in this chapter are not dissimilar to those that face other members of the community. Indigenous communities do not exclusively suffer from marginality, low income, poor health, motor vehicle dependence etc. However few other members of Australian society suffer all of these disadvantages as a collective, nor have the same cultural needs of Australia's Indigenous peoples. Solutions aimed at lessening these disadvantages need to keep these cultural factors in mind and provide services sympathetic to them. It is acknowledged that transport disadvantage is only one of the many barriers confronting Indigenous populations and that this is a small part of a greater concern. However if steps can be made to address some of the transport issues raised in this chapter, it is clear that a significant step in addressing educational, health, economic and social barriers will have been achieved.

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MARGINALISED GROUPS IN WESTERN SYDNEY

THE EXPERIENCE OF SOLE PARENTS AND UNEMPLOYED YOUNG PEOPLE

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Research in the area of transport and social disadvantage is complicated by overlapping social categories and their inseparability from the spatial distribution of transport coverage and service provision. This chapter discusses findings from research conducted in Western Sydney in 2005 that demonstrate that, while transport disadvantaged areas are spread around the outer urban areas of Sydney, transport disadvantaged groups are disproportionately located in these areas in Western Sydney. The travel needs and experiences of two groups, sole parents and unemployed young people, are discussed. It is argued that it is necessary to consider *travel needs* of different groups as distinct from their *transport needs*, and that this is best done at the local level in order to address transport disadvantage within areas.

INTRODUCTION

The dynamics of population change have reconfigured the social profiles of many localities in Western Sydney, one of the most populous urban regions in Australia (ABS 2002). Yet many sites of concentrations of low income households in Western Sydney have retained high levels of social disadvantage across generations (see Randolph and Holloway 2003, 2005). It is in these localities of concentrated disadvantage that the relationship between transport and social disadvantage is most apparent as an interaction between socio-economic, physical, temporal and spatial factors that determine accessibility to key activities and services (see Halden et al. 2005; Hine and Mitchell 2001; Lucas 2006; SEU 2003).

This chapter describes the role that transport plays as a factor contributing to the social exclusion of unemployed young people and sole parents in specific localities, based on research conducted in Western Sydney in 2005 (Hurni 2006).[1]

UNDERSTANDING TRANSPORT DISADVANTAGE

The needs of marginalised groups are frequently overlapping and vary between areas. To make public transport provision more responsive to diverse needs, it is necessary, therefore, to distinguish between transport disadvantaged *areas* and transport disadvantaged *groups*, as well as between *travel* needs and *transport* needs of socially disadvantaged groups in different localities.

Transport disadvantage, as defined by Stanley and Stanley (2004, p. 14) occurs 'where people experience a shortage of transport options, which restricts their mobility and hence their access to goods, services and relationships'. Socially disadvantaged groups can have restricted mobility, or be transport disadvantaged, because of their physical ability, gender, age, family status, employment status, income, access to a motor vehicle and ability to drive or be driven, language and literacy. A lack of access to a motor vehicle is more likely to be a problem in areas with fewer services and limited alternative transport options, that is, transport disadvantaged *areas*. The greatest levels of transport disadvantage will therefore be experienced by transport disadvantaged *groups* in transport disadvantaged areas. Variations in the provision of transport across

regions can exacerbate transport disadvantage for particular groups, as evident in the case of Western Sydney.

TRANSPORT AND SOCIAL DISADVANTAGE IN WESTERN SYDNEY

In 2001 Western Sydney was home to 1.6 million people (ABS 2002). The region is characterised by its youthful, diverse and growing population (see Gleeson et al. 2002). Yet, compared to the rest of Sydney, there are higher proportions of low income households, one parent families, unemployed people, newly arrived humanitarian entrants and Aboriginal and Torres Strait Islander people (ABS 2002).

Rapid growth since the 1950s through residential development and migration increased the population fourfold (Spearritt 2000) and outpaced the expansion of the public transport network in the region (MoT 1998). Not surprisingly, transportation is one of the most often cited regional problems (Randolph et al. 2001).The concern that transport disadvantage is potentially more widespread in Western Sydney than elsewhere in the Sydney metropolitan area impelled a systematic study.

RESEARCH ON TRANSPORT DISADVANTAGE IN WESTERN SYDNEY

A spatial analysis of transport service coverage data and ABS 2001 Census data was used to examine the distribution of transport disadvantaged areas and socially disadvantaged populations. Focus groups were then held with selected marginalised groups living in identified transport disadvantaged areas in order to explore their travel needs and travel experiences.

A conservative measure of transport disadvantage was based on the proximity and frequency of service of transport stops relative to Census collection districts. A Census collection district was considered 'transport disadvantaged' if its centroid was not within an 800m radial buffer of a transport stop with a frequency of at least every 30 minutes during the inter peak times of 8.30am and 3.30pm Monday to Friday. No distinction was made between buses or trains, although these two modes offer considerably different levels of accessibility and service. Nor were community transport services or taxi services assessed as part of the study. Nevertheless, the research provided a baseline snapshot of the distribution of transport disadvantage across Sydney.

TRANSPORT DISADVANTAGED AREAS IN WESTERN SYDNEY

Applying the criteria for transport disadvantage across the Sydney urban area revealed that about half of the area of urban Sydney could be classified as transport disadvantaged. Almost 60 per cent of these transport disadvantaged areas are in the Western Sydney region as shown in Figure 1.

WHO LIVES IN SYDNEY'S TRANSPORT DISADVANTAGED AREAS?

Integrating the ABS 2001 Census data with the transport coverage data showed that just over a third of the population of the Sydney urban area lived in transport disadvantaged collection districts. That is, roughly 1.2 million people in Sydney's urban area had limited access to public transport outside of peak hours. Approximately 700,000 people in Western Sydney were living in transport disadvantaged areas in 2001, as shown in Table 1.

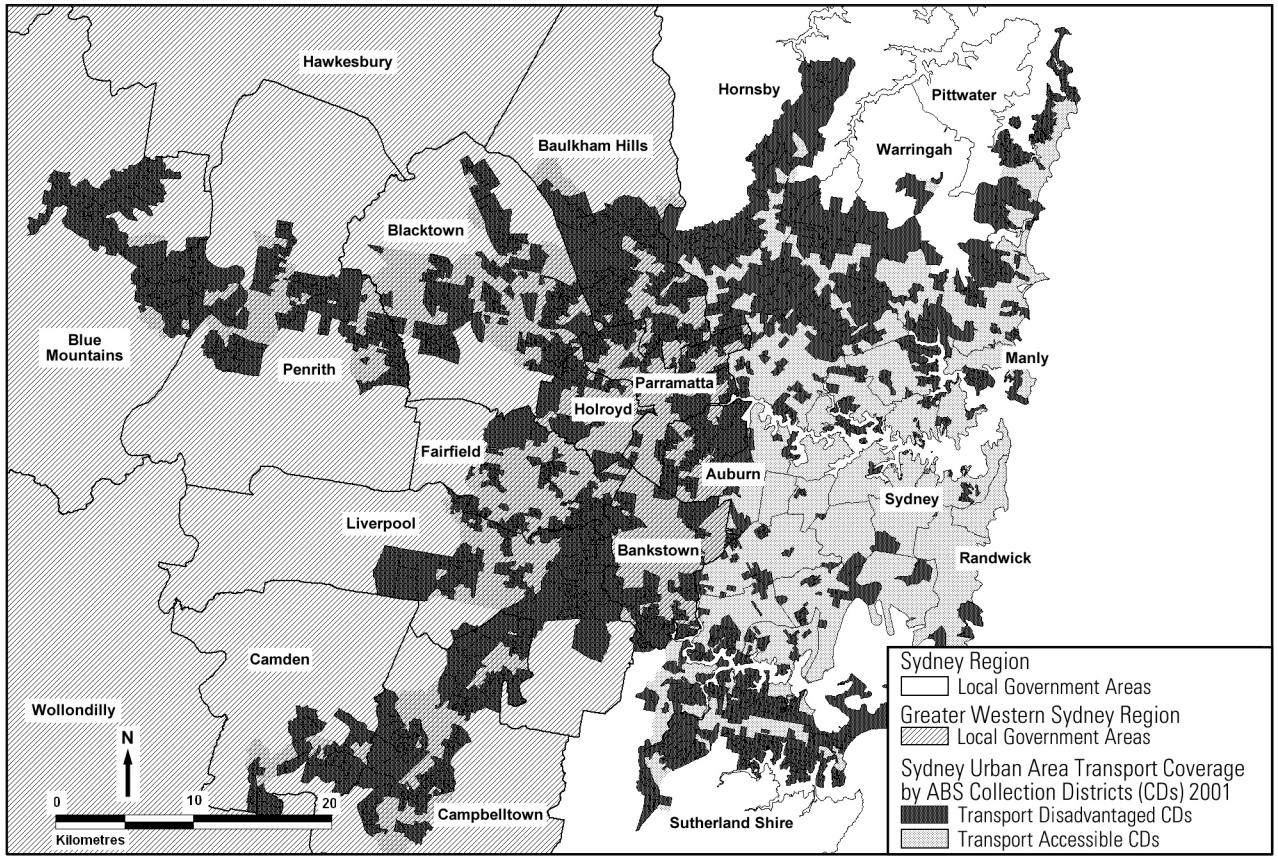

Figure 1 Distribution of transport disadvantaged areas in Sydney's urban localities

Transport disadvantaged areas were based on ABS Census 2001 collection districts, classified as 'not within 800m of a bus stop or train station with an "inter-peak" service at least every thirty minutes between 8.30am and 3.30pm Monday to Friday'. Data source: NSW Transport Population Data Centre

	Area	Population
Sydney urban area (total)	1,687.4155sq km	3,502,301 persons
Transport disadvantaged CDs in Sydney urban area	908.4973 sq km	1,203,078 persons
Transport disadvantaged CDs as a percentage of total CDs in Sydney urban area	53.8%	34.4%
Transport disadvantaged CDs in western Sydney	544.5594 sq km	700,076 persons
Transport disadvantaged CDs in western Sydney as a percentage of transport disadvantaged CDs in Sydney	59.9%	58.2%

Table 1 Area and population of Transport Disadvantaged Collection Districts in Sydney Urban Area, 2001
Source: ABS 2001 Census data, Transport Population Data Centre

Concentrations of socially disadvantaged people living in these areas were identified. The analysis showed that a large proportion of Sydney's sole parent families, and young unemployed people, were living in these transport disadvantaged areas, and more of them were in Western Sydney than in the rest of Sydney.

DISTRIBUTION OF TRANSPORT DISADVANTAGED UNEMPLOYED YOUNG PEOPLE

In 2001, the unemployment rate in Western Sydney was 7.4 per cent, slightly higher than the Sydney rate of 6.1 per cent. The unemployment rate for younger people (15 to 24 years), however, was much higher in Western Sydney at 15.9 per cent compared to 10.7 per cent for the same age group across Sydney as a whole. Unemployment was particularly high in Parklea and Bidwill in Blacktown in the west of Sydney and in Claymore and Airds in Campbelltown in the outer south west of Sydney. The younger age group accounted for 42 per cent of all unemployed people in the region (ABS 2002).

A cross tabulation of 2001 Census data on labour force status and households with no motor vehicle revealed that among unemployed people the proportion with no motor vehicle (16.8 per cent) is almost three times that for employed people (5.9 per cent) as shown in Table 2.

	Persons	Persons in households with no motor vehicle	Proportion of persons in households with no motor vehicle (%)
Employed	1,723,422	101,456	5.9
Unemployed	100,742	16,920	16.8
Total Labour force	1,824,164	118,476	6.5
Not in Labour force	866,737	142,364	16.4
Unemployed young people 15-24	29,945	4,976	16.6

Table 2 Labour force status and motor vehicle disadvantage in Sydney urban area
Data source: ABS 2001 Census, customised table

The geographic distribution of transport disadvantage and unemployment was highly concentrated. Three quarters (76.4 per cent) of unemployed people with no vehicle were living in transport disadvantaged areas in Western Sydney.

DISTRIBUTION OF TRANSPORT DISADVANTAGED SOLE PARENTS

While one parent families are also widely dispersed across the Sydney area, Western Sydney has a slightly higher proportion (16.6 per cent of all families) than in the rest of Sydney SD (15 per cent) and areas of particularly high concentrations. The majority (84 per cent) of lone parents in Western Sydney, as elsewhere, are women. One parent families represent more than half of all low income families (those earning less than $400 per week) across Western Sydney.

With federal government welfare reform objectives aimed at sole parents re-entering the workforce when their children start school, the transport options available to them are likely to have an important influence on their opportunities for finding work.

Combining the distribution of sole parents with transport disadvantaged areas, the results showed that 33 per cent of sole parents were living in transport disadvantaged areas. However, of these sole parents living in transport disadvantaged areas, 73 per cent were located in the Western Sydney area as shown in Table 3.

	Sole parents living in transport disadvantaged areas (Persons)	Proportion of Sydney's total sole parents (%)	Proportion of Sydney's sole parents who live in transport disadvantaged areas (%)
Western Sydney	23,226	24	73
Rest of Sydney	8,411	9	27
Sydney Total	31,637	33	100

Table 3 Distribution of sole parents in transport disadvantaged areas across Sydney
Source: ABS 2001 Census data and Transport and Population Centre Data

Particularly high concentrations of sole parents in transport disadvantaged areas were located in the outer west areas of Penrith and Blacktown and the south west area of Campbelltown, corresponding to high levels of public housing.

It can be concluded that, while the distribution of socially disadvantaged groups is widely spread across the urban area, the impact of transport on social disadvantage is highly concentrated.

TRAVEL NEEDS OF SOCIALLY DISADVANTAGED GROUPS

Focus groups with sole parents and unemployed young people were held in identified areas of concentrated transport disadvantage. The focus group participants were asked: 'What are the things you need to do on most days of the week?' This seemingly simplistic question exposed differences between groups in regard to their prioritised travel need.

UNEMPLOYED YOUNG PEOPLE

A total of 24 young unemployed people participated in three focus groups held in Claymore, Auburn and Penrith, 14 male and 10 female. Four participants had their driver's licence but only one (male) participant had a car. Reflecting the social profile of the area and highlighting the issue of overlapping social categories, the Auburn focus group had a total of nine participants, eight of whom were recently-arrived humanitarian entrants from Africa.

Recreational and social activities were prioritised, such as going to the movies or to hang out at the shops. For the African young people trips also included travelling across the region to meet with friends or relatives, and to attend English language classes and sport.

Trips to Centrelink or job centres were certainly not high on their list of priorities; however, travel for training or to fulfil work obligations for benefits, such as going to job interviews or to casual work and work for the dole opportunities, were mentioned as regular travel needs by the young people.

A common travel need for young people across the three locations was to casual or part-time work in fast food or retail outlets.

> I just finished this course here [Links to Learning] and now I'm just looking for a job. [What sort of work are you looking for now?] In a shop. I've got a job already, at Hungry Jacks on Mulgoa Road. It takes about half an hour to walk there. (Young man, Penrith)

A few of the young people in the Auburn and Claymore focus groups were involved in organised sport or recreational activities. One was a young man in Auburn who was training in athletics at Sydney Olympic Park. For these young people, sporting activities such as soccer or basketball were 'very important' to them.

SOLE PARENTS

A total of 15 women participated in the focus groups for sole parents, six in Claymore and nine in Penrith. Six of the women had their driver's licence but only three owned a car. The Claymore mothers had older children with most having at least one child attending school, and two with high school children. In Penrith the mothers mostly had preschool age children and infants.

Sole parent travel needs were quite diverse including shopping, but also not surprisingly a lot of child-related activities including playgroups and support groups for families with children with special needs, volunteering, dropping off and collecting children from school, taking them to after-school activities or casual employment, as well as part-time study and work for themselves. Less frequent trips included taking their children to special places during school holidays.

> I come here, once a week, to play group. It's important. We get information about things. (Sole parent, Penrith)

> Well one thing I'm sure [is the same for] most parents, you know, and my children are heavily involved in sport. So I've got two older boys who are in sport so, you know, and training's on Tuesday and Thursday night, but now, I've got a vehicle it's so much easier, you know, but when I didn't have that I had the trouble of, you know, waiting for the bus and if the bus didn't come

> or was late we'd be late for training. And even coming back, by 7.30[pm] that's the last bus. (Sole parent, Claymore)

The travel needs of these two groups reflect their social circumstances and their life stage. While both groups had common travel needs for shopping and vocational training, differences were most apparent for social and leisure activities.

TRANSPORT NEEDS OF SOCIALLY DISADVANTAGED GROUPS

Differences between these groups can also be found, not so much in origins and destinations, but in terms of their transport needs, such as trip purpose and mode suitability.

UNEMPLOYED YOUNG PEOPLE

For many of the young people in the focus groups, safety and fear of crime emerged as the priority concern. This was largely, but not only, related to wanting to go out at night and on weekends to the movies and socialise. Trying to get work in casual service industries like local fast food outlets also presents the same problems of getting home late at night and on weekends when the buses are few and far between.

> I always have to walk, I tried to catch transport but it's not the right times sometimes, it depends what time on my shift starts. [Do you have shifts at night?] Yeah I do have night shift but normally I get a lift. I had to walk home at 12.30 at night once. (Young man, Penrith)

Access to formal vocational training presented particular transport difficulties for young people because of poorly connected bus services.

> I used to go to TAFE but I don't do that now but I used to… I used to… have to catch a bus to the train station and then get another bus from the station to the Kingswood TAFE… It would take over an hour to get there, so I was mostly late. (Young man, Penrith)

Where training or other activities were provided close to the town centre, young people reported that they had no problem getting there. For all of the young people, they either walked or caught a bus to the youth centre where the focus group was held.

Affordability was an equally important issue for young people. About a third reported that the main reason for not being able to travel somewhere was because they didn't have money.

> We used to go into the city, maybe once a week. [Why don't you go now?] Because it's too expensive. (Young woman, Penrith)

Some reported, however, that when they could not afford a ticket they took a risk of travelling by train without a ticket. Several reported being caught for fare evasion and subsequently having to pay fines of up to $200. This was regarded by young people in Claymore and in Penrith as a common occurrence and one that they had to risk because often they did not have enough money to buy tickets. For the refugee young people, however, they reported feeling victimised and afraid.

> I was standing waiting on the platform, I was just waiting for a friend. The officer asked me what I'm doing. I'm just waiting. He ask me for to show my ticket. I tell him I wait for my friend. He ask my name. He gave me a fine. $200. What for? I not going on the train. I worry very much. (Young man, Auburn)

SOLE PARENTS

The suitability of the transport for the trip purpose is a particular concern for sole parents because of the responsibility of travelling with children and requiring more space for strollers, bags and larger quantities of groceries that need to be purchased.

> I do a big shop once a fortnight at Campbelltown and get a cab home then I get smaller amounts every couple of days down at Eagle Vale. If you've more than two bags, forget it, you can't get them on the bus. The buses don't have enough room. (Sole parent, Claymore)

> And on the trains, it's hard too. Sometimes if there's no one to help you with walking up stairs on the train station you just have to try to carry everything and it's hard. When there's a lift and it's working it's alright. (Sole parent, Penrith)

Poorly connected bus and rail services were a particular concern for sole parents needing to go further than the local shops. Travelling with young children is extremely tiring when waiting times are exaggerated because of missed or late connections between bus and train. Waiting times for taxis for local shopping trips are also lengthened for women with infants because there are fewer taxis equipped with baby capsules.

For those trying to do study or work, fitting in these activities around school hours is extremely problematic if relying on infrequent public transport.

> Even if I'm here, [in Claymore] if it [work] goes to 3 o'clock, I can't be at school at quarter to three. I can't be in two places, and even if I finish at 2.30 I still can't get back to the school in 15 minutes. If I drove, yes, but I can't walk there in that time and I can't get a bus there unless there's a bus right there at the time. (Sole parent, Claymore)

The cost of transport is also of great concern for sole parents, even when eligible for concessions themselves the total cost of tickets for themselves and 2 or more children greatly inhibits the number of trips they make.

> I pay $2.50 and I got my five children. I've got all their names on the pension card can't I get one ticket for all of them? … some time I don't want to go because the price is too much but only on school holidays I like to take them. (Sole Parent, Claymore)

SOCIAL IMPACTS OF TRANSPORT DISADVANTAGE

In simple terms, the transport related barriers to access result in transport disadvantaged people being excluded from many activities and services that people without mobility constraints take for granted.

Access to education, training and employment in the areas were reported to be greatly affected by a lack of access to transport. In both of the sole parent groups and the young people groups in Claymore and Penrith there were participants who had dropped out of formal training because of difficulties travelling.

Young people in these areas might prioritise participating in social and recreational activities, but have few opportunities for entertainment in their local area and are limited by infrequent services. Fear about personal safety limits the distance they are prepared to travel to take up other opportunities. They would like to go to the city more often; they describe how boredom leads to antisocial behaviour. The group in Claymore described how the local preschool got burnt down: as one woman stated, 'it's proof of how bored the kids are around here'.

For sole parents without a car in transport disadvantaged areas, participating in activities such as taking their children to after school sporting or leisure activities is, as one woman described it, 'out of the question'. Their children then miss out on opportunities for extra learning, physical activity and the health benefits that flow from participating in sport and leisure activities. Having to access health services using public transport with sick children is extremely difficult and virtually impossible on weekends or at nights, so often they rely on friends or neighbours with cars to assist. Managing to get to a range of activities is increasingly difficult the more times a change of transportation is necessary. As a woman expecting her second child said, 'With the money I'll get for this one I'm either going to get my licence or a get a decent pram'.

IMPROVING ACCESSIBILITY FOR MARGINALISED GROUPS IN WESTERN SYDNEY

Determining options for improving access and mobility for sole parents and young unemployed experiencing transport disadvantage requires a recognition, in the first instance, that these groups have travel and transport needs that may not be satisfied by existing transport service provision. Although this sounds like it is stating the obvious, the evidence of a lack of recognition of these needs exists across all three tiers of government.

At the Federal level, the recently introduced 'welfare to work' policies aimed at increasing the workforce participation of sole parents and people on disability pension (DEWR 2006), include increasing provision of travel allowances, but only for people who have a disability. Community transport services are primarily funded for people who are aged or disabled. Most community transport providers have limited capacity to offer trips to sole parents for activities such as to attend playgroups, or to young people for afternoon or weekend sporting or recreational activities.

Local government has important sources of information about the local population and the specific needs of different groups. This information needs to be more widely shared with transport planners and providers and fully considered in planning for local transport services.

Most of the travel needs of these two groups can be satisfied within their local area, yet the bus services, apart from school services, tend to be focussed on serving the employed commuter, rather than providing transport to local services, such as TAFEs or hospitals. Wait times for

connections between services were considered very problematic for sole parents with young children. Improved coordination of services is an important recommendation but also routes designed to provide a circuit of local services, not just a stop at the train station, would increase frequency of services around town centres and reduce the need to change buses.

CONCLUSION

As the research described in this chapter shows, it is possible for two different social groups within the same location, in this example young unemployed people and sole parents, to have the same travel need, such as to travel to the shops, but also to have different transport needs.

Planning to meet diverse travel and transport needs can certainly seem to be more difficult than trying to achieve a 'best fit' service. Dodson et al. (2004, p. 26) argues that concerns with diversity and difference are misguided and that a universally adequate service is the preferred objective (Mees 2000). However, in order to achieve such an objective it is necessary to recognise first that such differences exist between travel and transport needs and that these are critical to determining whether the available service is indeed adequate to meet the needs of all groups. A systematic assessment of the spatial concentrations of socially disadvantaged groups in relation to the existing transport service coverage will help to determine localities for priority action. Local councils have an important role in needs assessment. Planning of local transport services can then be better matched to meet the identified transport and travel needs of diverse groups in local areas.

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ENDNOTES

1 Research on transport and social exclusion in Western Sydney was conducted in 2005 by the author and Joan Gennery, former transport development worker at the Western Sydney Community Forum. The project was funded by the University of Western Sydney in partnership with the Western Sydney Community Forum. The research involved analysis of 2001 ABS Census data and transport service coverage data provided by the NSW Transport and Population Data Centre and included seven focus groups across four localities. Information about the other groups can be found in the research report.

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TRANSPORT DISADVANTAGE AND AUSTRALIAN URBAN PLANNING IN HISTORICAL PERSPECTIVE

THE ROLE OF URBAN FORM AND STRUCTURE IN SHAPING HOUSEHOLD ACCESSIBILITY

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This chapter explores the often forgotten element of the transport disadvantage problem, the urban planning systems which have generated the Australian urban form that create travel needs. The history of urban form development in Australia is described including the emergence of suburban motorisation and associated car dependence and disadvantage. This chapter critically reviews contemporary urban planning responses pointing out gaps between rhetoric and action in providing feasible transport alternatives on the urban fringe. It concludes by calling for more concrete steps towards addressing car dependence highlighting the emerging problems of climate and oil dependence as new drivers of change.

INTRODUCTION

This chapter examines how the relationship between land-uses, especially housing, and transport systems have shaped the urban structure and form of the Australian city to identify some of the basic causes of transport disadvantage. The relationship between land uses and transportation systems is one of the most basic structuring processes of cities. The chapter approaches this issue from an historical perspective which is then used to comprehend the contemporary role of urban planning and infrastructure in ameliorating or compounding transport problems. The chapter concludes by identifying potential new directions for land-use and transport planning to address Australian urban transport disadvantage.

THE EMERGENCE OF AUSTRALIAN URBAN FORM AND STRUCTURE

Australia's major cities developed in the early 19th century as colonial port towns providing focal sites for the transportation and exchange of extractive commodities and finance for disposal in expanding international trading markets. The cities populations grew rapidly and by the end of the 19th century most Australian cities had acquired significant, if uneven, levels of industrial activity with expanding urban populations and intensifying demands for urban space, habitation, services and mobility.

As with growing industrial metropolises found elsewhere in the mid- to late-19th Century, land uses and transportation systems commingled with little governmental or public oversight in the Australian city. Much industrial activity occurred near the city centres and drew its labour from a workforce located nearby. This workforce in turn required housing. With transport options for the majority of the working classes largely limited to walking, workers in general lived near their workplaces. The inner zones of the nineteenth century Australian city thus formed a dense mix of land-uses, including factories, offices, warehouses and workers' cottages. The competition

for land generated by this combination of land-uses within relatively compressed urban space stimulated high residential densities and crowded living conditions (Freeland 1972). Many households rented their housing from slumlords – thus by 1891 less than 28 per cent of Sydney residents owned their own housing (Kass 1987). The tiny terrace cottages that remain in some parts of Melbourne's Fitzroy and Sydney's Surry Hills reflect this cramped early-urban period.

From a transport disadvantage perspective the early Australian city provided what would today be considered relatively good accessibility for most residents, with all but a few trips made on foot. The disadvantage of this arrangement however was that housing prices were often high relative to household incomes, while quality was low.

New modes of travel in the form of railways and tramlines began to break up the early relationships between residence and home that had developed in the 19th Century city (Fishman 1989; Jackson 1987). Trams and trains sped the outward expansion of Australia's early suburbs by providing access for the masses to cheaper land far from the congested cores (Davison 1974).

As the suburban population grew the spatial land economy around the rail stations created a business imperative for the outward location of other land use activities. In Sydney and Melbourne, as Frost (2000) describes, new suburban villages with vibrant commercial hubs sprouted around each city's suburban rail stations at places like Malvern and Ashfield. Yet even as the radial growth of suburbs extended the possibility for residential location far beyond the central cities the new suburban villages extended little further than walking distance from the local rail station. Beyond the station, land prices declined sharply and the landscape of green wedges between the rail lines remained semi-rural (Frost 2000). In the areas of the inner and middle suburbs that were transected by tramlines the spaces between the rail connections, were filled by a mix of land-uses creating large tracts of continuous development (Freeland 1972). Other than the rail fare, access to the Australian metropolis was largely a pedestrian matter even until the mid-20th Century (Manning 1984). The introduction of bus services in the areas past the tram lines from the 1910s provided circumferential connections between suburban rail stations but these services have remained underdeveloped.

The expansion of the suburbs was however socially differentiated. In general, only households with the means to afford home ownership and the costs of daily commuting back to central city employment sites could make the move to the suburbs. Access to good quality housing was thus closely linked to transportation access. Until this period most people lived within walking or cycling distance of work and retail centres or near public transport services that permitted travel to these activities. While private motor transport emerged in the early decades of the 20th Century its use was largely restricted to the wealthier segments of society. For the masses public transport remained the dominant mode for travel 'beyond walking distance' (Manning 1984). These patterns were to change rapidly following the new urban, housing and transport relationships that developed after WWII.

SUBURBAN MOTORISATION

The period following WWII marked a major transition in the history of Australian urban development. Housing shortages during the Great Depression to the end of the war had generated high levels of social disadvantage. Post-war planning sought a major increase in the supply and quality of housing in Australian cities to reduce the social disadvantage caused by housing

shortages (Commonwealth Housing Commission 1944). Much of this new housing was to be provided by an expansion of home ownership in the suburbs.

Detached dwellings on spacious individual blocks comprised the favoured cultural housing type in Australia and demand for land after WWII grew quickly as developers unlocked outer suburban land for housing. The combination of population and household income growth and cheaper mortgage finance produced a rush to the suburbs. Population levels fell in central and inner city areas but grew in outer suburbs far from the CBD (Neutze 1977).

This post-war suburban rush was motorised. From the late 1950s, Australia's planners embraced new models of suburbanisation based on the motor car and freeways. Mass motorisation and freeway building impacted on public transport in two important ways. Motor vehicles came into conflict with the trams and other traffic on suburban and arterial thoroughfares and drew patrons away from the rail services. The building of new roads consumed government finance that might otherwise have gone to public transport, thus limiting service extensions to new suburbs.

The result of mass suburban motorisation was a dramatic decline in Australia's public transport patronage. In Melbourne travel to work by non-car modes declined from just over 80 per cent in 1951 to just less than 50 per cent by 1964 and less than 33 per cent by 1976 (Moriarty and Mees 2006). Australia's public transport systems have languished since WWII – in most cities patronage bottomed out in the 1990s and for most of the period since has only matched population growth since then.

The motor car permitted a previously unknown degree of mobile freedom which meant that suburbanites were no longer tied to the radial tram and rail routes for their transportation and travel opportunities, and could traverse the city. Commerce, industry and retail followed the workers to their new suburban spaces and detached from the train and tram systems (Alexander 1981). As Goodman and Coote (2007) demonstrate, contemporary suburban retail deveopment continues this pattern of dispersed car dependent shopping centres.

AUTOMOBILE DEPENDENCE AND SUBURBAN DISADVANTAGE

Australia's planned post-WWII land-use and transport transition to the use of private motor vehicles as the dominant mode of suburban transport has created high levels of automobile dependence in Australian cities. By the late-1970s Australian researchers were beginning to raise concerns about the extent and effects of this car dependence (e.g. Bannister 1979; Davies and Glazebrook 1980) while others were beginning to become concerned about the environmental and social implications of an urban form and structure organised around the automobile (Morris 1981; Newman et al. 1985). While the private car had assisted in alleviating post-WWII housing disadvantage by providing access to outer urban land, it had in turn generated new problems.

Morris (1981) was among the first to demonstrate that increasing suburban car dependence was producing new forms of social disadvantage:

> Although the motor car has lessened social disadvantage caused by distance, it has created problems of its own, the most significant being marked disparities in accessibility and mobility within the community. The motor car is not available to everyone. Yet large tracts of our cities have been shaped by the car,

> giving rise to dispersed urban activity which cannot be reached conveniently by other modes of transport (p. 21).

Morris identified multiple social groups as being vulnerable to transport disadvantage, including many that other authors in the present volume have recognised as experiencing transportation difficulties:

- Young persons – unable to drive or dependent on public transport.
- Aged persons – unable to drive due to lack of licence or frailty.
- Poor – unable to afford a car or public transport.
- Disabled – unable to operate car or using conventional public transport. (Morris 1981, p. 23.)

Households on low incomes were found to be particularly affected by automobile dependence especially where they were forced by residential housing markets to 'trade-off' outer suburban transport accessibility against other objectives such as home ownership. As well as suffering poor access to employment and community resources, outer suburban households position in metropolitan housing markets meant they could expect weaker capital gain from their housing investment (Burke and Hayward 2001).

Urban spatial differences in household transport energy costs also became an issue of concern from the late 1970s (Bannister 1979; Davies and Glazebrook 1980; Newman et al. 1985). Newman et al. (1985; 1990) demonstrated that households in the outer suburbs of Australian cities used much higher amounts of energy to satisfy their transport needs than households in inner or middle suburban locations, such that:

> Disadvantaged groups living in outer areas… appear to suffer a large energy penalty due to their location (e.g. 30 per cent higher fuel costs for journey to work trips than in Perth overall) yet they have reduced ability to pay for it (Newman et al. 1985, p. 14).

Further studies confirmed that outer suburban areas are where the greatest extent of transport disadvantage is likely to be found. Maher's (1992; 1994) research demonstrated that households in outer suburban zones were more likely to face difficulties in accessing employment and community services than those in middle or central areas. The cause of this problem was the complex relationship between housing markets, dispersed land-use locations, household social status and transport infrastructure in Australia's outer suburbs.

Similar problems were confirmed by Burnley et al. (1997) in their study of households attempting to attain home ownership by moving from central and middle suburbs of Sydney to outer suburban areas. Burnley et al. (1997) found that the households they studied became more car dependent after their suburban move such that:

> there was a pronounced lengthening of journey-to work times after relocation, for the majority, which implies considerable sacrifice to achieve housing access and quality objectives… Given the marked overall increase in travel times after relocation, car dependence implies negative equity and externality outcomes… (p. 1123).

While the Australian tenure norm of home purchase and ownership remains a key objective for many households, achieving this goal clearly comes at the risk of significant transport disadvantage for some groups. In contrast to the historical experience in Australian cities, in which housing quality improvements were achieved through greater access to suburban land, leveraged by transport infrastructure, in the contemporary Australian city access to good quality and affordable housing for those on modest incomes is now achieved at the risk of reduced economic and social access due to deficits in transport services and poor links to dispersed land-uses.

Few researchers have examined these patterns in detail particularly in relation to the critical factors of transport infrastructure, housing markets and urban form. Dodson (2005) sought to assess the degree of 'spatial mismatch' between locations with affordable housing relative to areas of employment growth for low-income households in Melbourne and found that while there was only modest evidence for spatial mismatch there was likely to be problems with accessibility to job rich areas for those living in lower-cost housing areas.

One of the most comprehensive attempts to understand the socio-economic basis for transport disadvantage is Cheal's (2003) study of what he termed 'transit rich' and 'transit poor' Melbourne, on the basis of public transport availability and quality. Cheal (2003) demonstrated convincingly that residents of the 'transit poor' areas were socio-economically worse off than those in the 'transit rich' areas across a range of characteristics, including income, employment and educational status. Cheal argued that there was likely an association between the inadequacy of public transport in the middle and outer suburban 'transit poor' areas and the socio-economic status of the residents of these areas.

Dodson et al. (2007) found uneven distribution of public transport service inadequacies in the Gold Coast City combined with the city's urban socio-spatial structure to generate poorer access to high frequency public transport services for lower socio-economic status Gold Coast residents. Gold Coast residents aged less than fifteen years and unemployed residents also had poorer access to public transport than the city's overall population. Transport disadvantage was generally lower in older established areas compared to new outer urban development zones within the Gold Coast, suggesting that transport disadvantage there, as in other Australian cities, is closely linked to urban structure and transport infrastructure provision.

Dodson and Sipe (2007) examined the likely spatial distribution of socio-economic impacts from rising fuel costs arising from the marked increases in global petroleum prices seen during 2004–2007. These authors found that households in the inner and middle zones of Australian cities would likely be less vulnerable to adverse socio-economic impacts from rising fuel costs, in part because of an urban structure that locates wealthier residents in these areas and provides them with transport alternatives such as higher quality public transport and non-motorised travel facilities. By comparison, these authors noted, outer suburban areas had higher concentrations of modest income households who are more vulnerable to adverse impacts from rising fuel costs because the lack of adequate public transport in these areas meant residents had few viable alternative alternatives to the private motor car.

The studies described above have been almost unanimous in identifying the urban form, structure and transport systems of Australian cities as contributing to transport disadvantage for residents of outer suburban zones. The outer suburbs of Australian cities must now ask whether having assisted to overcome the 20th Century problem of housing disadvantage they

now face new challenges from the 21st Century risks to the private transport system upon which they have become overwhelmingly reliant.

RECENT POLICY RESPONSES

Over the past decade there has been a growing recognition and acceptance of the interaction between urban structure, transport systems and household socio-economic opportunity. Some of this recognition has begun to influence metropolitan strategic planning. This section assesses the likelihood that these plans will begin to alter the urban structural housing-transport relationships that have produced the types of suburban transport disadvantage described in the previous section. The discussion focuses on the *Melbourne 2030 Metropolitan Strategy*, the *Sydney: City of Cities* metropolitan plan and the *South East Queensland Regional Plan*. The main focus of discussion is on the Melbourne plan as this has been operative for longer than the SEQ or Sydney plans and has been subjected to a greater level of scholarly evaluation.

MELBOURNE 2030

The *Melbourne 2030* metropolitan strategy (Department of Infrastructure 2002b) acknowledged problems of inadequate transport access for those without motor vehicles (e.g. p. 24) and expressed a partial rhetorical intent to respond to these problems. Hence urban growth was to be managed:

> [T]o produce an urban form that can be serviced efficiently so that public transport services are provided concurrent with development. This will avoid delays in public transport provision that require new residents to commit to multiple car ownership – which tends to entrench car use… (p. 34).

The plan also claimed that 'local public transport services will be improved, particularly bus services, and a key focus will be improved services in middle and outer metropolitan areas' (p. 41). The policy also intends to locate a substantial proportion of new housing in 'activity centres' that offer good access to services and public transport (p. 57). The focus in *Melbourne 2030* on increasing housing in activity centres is notable but the specification of the proposed activity centres indicates that the majority of these will be located at sites on transport nodes in inner or middle suburban zones. Because it focuses on inner and middle zones, the activity centres policy will likely have limited impact on areas beyond the higher quality public transport system, where the most transport disadvantaged residents are found.

The *Melbourne 2030* plan includes a Growth Areas policy (Department of Infrastructure 2002a) which includes Growth Areas Committees to provide advice on the management of the five major growth corridors. Of the Growth Area plans released so far there is little discussion of the integration of transport services with new residential and activity zones. None of the Growth Area planning processes appeared to have undertaken any analysis of current problems of transport disadvantage in their zones, nor do they identify transport disadvantage as a chronic problem in Melbourne that must be addressed through planning. This lack of detailed local transport planning seems unfortunate, given that 31 per cent of all new dwellings in Melbourne were intended to be constructed in growth areas under the plan (Department of Infrastructure 2002a, p. 4).

Public and scholarly criticism of the *Melbourne 2030* transport elements led to two further plans being released since *Melbourne 2030* in the form of the 2005 *Linking Melbourne* plan and the *Meeting our Transport Challenges* strategy. *Linking Melbourne* again recognised the need for improvements in outer suburban transport services but provided no commitments to service provision. *Meeting our Transport Challenges* appeared to recognise problems of transport disadvantage, with an opening statement that declared:

> The key to liveability is managing land use and transport networks to maintain the highest level of access to community, services and employment opportunities (Department of Infrastructure 2006, p. i).

Yet the plan itself does not detail either the new services to be provided and the need to overcome transport disadvantage caused by lack of alternatives to the private motor car. Thus section four of the plan notes the need for improvements to middle and outer suburban bus services, but provides no minimum standards covering accessibility or frequency of operations. From a transport disadvantage perspective The *Meeting Our Transport Challenges* document and the *Melbourne 2030* metropolitan plan seem intended to continue for the foreseeable future the post-WWII model of car-based outer urban development, in which the ongoing provision of dispersed accommodation takes precedence over the provision of sustainable transport, despite more than two decades of scholarship warning of the social and environmental inadequacies of this approach – including various critiques since the release of the *Melbourne 2030* plan (Dodson 2003; Goodman and Coote 2007; Mees 2003).

SYDNEY: CITY OF CITIES

Sydney's new metropolitan plan, like the Melbourne 2030 strategy, recognised the need for better public transport and support for non-motorised travel, a problem that has long been noted, especially in the city's western suburbs (Mees 2000a). Hence the plan promised 'improved local transport such as walking and cycling facilities and bus services that link neighbourhoods, villages and town centres to major centres' (p. 155). The *City of Cities* plan proposes to concentrate new urban development around 35 individual suburban centres most of which are situated on the metropolitan rail network and further interconnected by a set of 'strategic bus corridors' operating at relatively high frequencies. The Sydney plan also proposes to extend the metropolitan rail network to new greenfield growth zones in the southwest and northwest. To support the transport access objective, the Sydney plan intends that 66 per cent of these dwellings will be located close to high quality public transport although a definition of what constitutes 'high quality' in transport services was not detailed.

It is difficult to discern the likely extent of new transport provision at the local scale under the Sydney plan. The plan is weak in setting out local bus service improvements in outer suburban zones and leaves the determination of service quality, coverage and integration to subsequent negotiations between the largely private bus operators and the NSW Ministry of Transport. It is worth noting Mees (2000b) and Vuchic's (1999) agreement that leaving service planning to private operators, and who over the past 60 years have failed to reduce transport disadvantage in the areas of Sydney that they serve, is unlikely to achieve the goals of integrated transport and metropolitan planning. While it is too early for final conclusions there is a strong likelihood that

the *City of Cities* plan will have at best modest success in redressing the problems of transport disadvantage in Sydney's suburbs, particularly those in the outer western growth areas who are beyond the reach of the heavy rail network.

SEQ REGIONAL PLAN AND INFRASTRUCTURE PLAN

The 2004 *South East Queensland Regional Plan* and *Infrastructure Plan and Program* ushered in a new era of state government intervention in land-use planning at the local scale in response to widespread concerns about the sustainability of development patterns. The SEQ Regional Plan and Infrastructure Plan don't directly address transport disadvantage, however the SEQRP recognises problems with dispersed development and identifies a need to increase the relative levels of walking cycling and public transport use. Like the Melbourne and Sydney plans the SEQRP and SEQIPP outline the intended development pattern for the metropolitan region and the major infrastructure that will be provided. However the detail of provision for public transport, walking and cycling at the local scale is relegated to local government to determine vial *Local Growth Management Strategies* (LGMS) and *Integrated Local Transport Plans* (ILTP).

There is little detail provided in the SEQRP or the SEQIPP regarding local scale provision of new public transport services in growth areas. To date no Local Growth Management Strategies have been prepared in South East Queensland. There is an institutional split in SEQ between the Office of Urban Management which provides state government oversight of the LGMS process and Queensland Transport which oversees the ILTPs. Actual service provision, and inevitably further local scale transport planning oversight is provided by the public transport authority Translink. Translink's recent draft *Network Plan* provided little cause for optimism about the likely addressing of transport disadvantage in South East Queensland, as its new service investment was heavily weighted toward inner and middle suburbs within greater Brisbane. Walking and cycling receive almost no recognition in the SEQIPP despite rhetorical support in the SEQRP – of the $8,585 million in transport spending for greater Brisbane outlined in the SEQIPP, only $200 million (2.3 per cent) is to be spent on walking and cycling. Even public transport is to receive only 28 per cent of the greater Brisbane transport budget, the other 60 per cent will be spent on roads. Any objectives of reducing the transport disadvantage arising from car-based suburban development are primarily rhetorical and are certainly not given great weight by the region's planners.

CONCLUSIONS: BEYOND TRANSPORT DISADVANTAGE IN AUSTRALIAN CITIES

This chapter has demonstrated that the history of the form and structure of Australian cities is in large part a history of the attempts to overcome the challenge of meeting the housing desires and needs of urban populations while ensuring adequate spatial access beyond the home to employment and services. The chapter has demonstrated how public transport enabled the Australian city to expand and open up new space for high quality housing. With the mass availability of private motor vehicles after WWII housing and other urban land-uses became detached from public transport at large scale. The forms and distribution of transport disadvantage that have emerged in recent decades are a direct legacy of the shift in urban planning towards car-based urban development. In Australian cities the young, the aged, the poor and the incapable face

extensive deficits in their participation in employment and community life. Our cities face important questions as to whether access to affordable housing for all should come at the social and economic costs of spatial and transport exclusion.

The assessment of recent metropolitan plans has demonstrated that the planning desire to avoiding or redress the problems of car dependent urbanisation seem at best secondary to the continuation of the post-WWII housing and automobile urban model. The first of these 21st Century schemes, the *Melbourne 2030* Metropolitan Strategy, has been resoundingly and deservedly criticised for its failure to provide an alternative urban form, structure and transport network to dispersed, decentralised car-based development for that city's outer suburbs (Buxton and Scheurer 2007; Goodman and Coote 2007). Recent plans for Sydney and Brisbane similarly provide little confidence that they will succeed in addressing these issues.

With energy insecurity and greenhouse emissions pricing likely to impact on the quality of transport access provided by the automobile, the trade-offs between space, housing and access in the structuring and planning of Australian cities may no longer be viable in their current form. Securing adequate, alternative and sustainable modes of transport to the motor car, throughout all areas of Australia's cities, is now the paramount challenge of the 21st Century. The fumbling represented by recent plans does not bode well and will only magnify the task ahead.

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TRANSPORT AND SOCIAL DISADVANTAGE IN VICTORIA

A GOVERNMENT PERSPECTIVE

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This chapter takes a Government perspective on transport disadvantage. It outlines the Victorian government's new approach to addressing risks of transport disadvantage and social exclusion, through the concept of 'Social Transit'. The application of this approach is seeing significant increases in public transport service levels in outer metropolitan and regional Victoria, to provide more comprehensive transport options for 'at risk' populations. Bus service levels, in particular, are being increased to achieve this purpose.

INTRODUCTION

Most governments have long understood that transport policies need to be responsive to the needs of disadvantaged individuals and groups within the community and most jurisdictions fund public transport services for a range of social as well as environmental and economic reasons.

However, to date, most governments have addressed the social objectives of transport through political processes; calling on elected representatives to make judgements on social needs. It is only in some areas that work has commenced to support government decision-making with the development of social transit policy frameworks.

This therefore leads to a number of fundamental and difficult questions for governments:

- What is the scale and nature of social disadvantage within the community?
- In what ways is transport part of the problem and therefore potentially part of the solution?
- What range of mobility and access needs can be expected to be met publicly rather than privately?
- What are the most cost-effective interventions for governments?
- How can such interventions best be planned and delivered: centrally or at a community level?

There is no single correct answer or approach to any of these questions. Yet government cannot wait for perfect answers before responding to the needs of those who are experiencing disadvantage.

This chapter describes the factors that have contributed to transport disadvantage and social inclusion in Victoria and the Victorian Government's policy and program responses.

DEFINING TRANSPORT DISADVANTAGE AND SOCIAL INCLUSION

Transport disadvantage and social inclusion are complex and multidimensional issues.

Everyday experiences show that affordable and available transport is essential to being able to access employment, educational, health and social opportunities to participate actively in the community. Transport disadvantage can occur in response to location, personal characteristics and/or economic factors:

i. Locational transport disadvantage – occurs when there is very little or a complete absence of publicly funded transport choices, or its scheduling is not frequent enough to meet needs.
ii. Personal disadvantage – occurs when a person's mobility is affected by age (including youth), disability, frailty, poor health or language barriers.
iii. Economic transport disadvantage – occurs when cost prohibits access to available transport. It also includes the concept of transport stress experienced by a household, which is where an unreasonable proportion of household income is absorbed by transport costs (Department of Infrastructure, Department of Human Services, Department of Education and Training, and Department for Victorian Communities, 2006, p. 8).

THE VICTORIAN CONTEXT

Victoria is the smallest but second most populous of Australia's mainland states with an area of 227,000 square kilometres, similar to the area of the UK. The population of five million broadly comprises:

- 1.1 million people living in the pre-war suburbs of Melbourne that are generally located around a network of train and tram services that provide relatively high levels of access to activities and services;
- 2.4 million people living in the post-war middle and outer suburbs of Melbourne where activities and services are geographically dispersed (generally beyond walking distance) and public transport services are 'thinner';
- 0.6 million people living in regional centres of more than 20,000 population; and
- 0.9 million people living in small towns or rural settlements.

In addition:

- One in ten households does not own a car (Department of Sustainability and Environment 2006a, pp. 6.14) and one in three Melburnians do not have a driver's licence (ABS 2001).
- 140,000 Victorians aged 60 and over report a need for assistance with their mobility and over 157,000 need assistance with transport (ABS 2003).
- 3.8 per cent of adult Victorians feel that they could not get to places they needed to go or often had difficulties in doing so. A further 11.6 per cent sometimes had difficulties. The 3.8 per cent with serious access problems are heavily concentrated in some sub groups such as the following:

    - 21.2 per cent of those with 'poor' health
    - 14.2 per cent of those with a 'core activity limitation' (disability)
    - 3.6 per cent of those unemployed
    - 7.9 per cent of those in the lowest quintile of household income
    - 7.8 per cent of those retired
    - 7.5 per cent of those living alone
    - 7.2 per cent of those aged 65 or over
    - 6.3 per cent of those living in single parent families (Department of Sustainability and Environment 2006a, pp. 6, 14).

These statistics suggest that around 800,000 Victorians are suffering some form of access problems, including around 200,000 for whom the problems are severe. It is estimated that some 120 million trips each year cannot currently be made.[1] This represents an unmet demand equivalent to about 25 per cent of travel currently being made on public transport in Victoria. Figure 1 indicates the relative sizes of each of these sectors as measured by trips made.

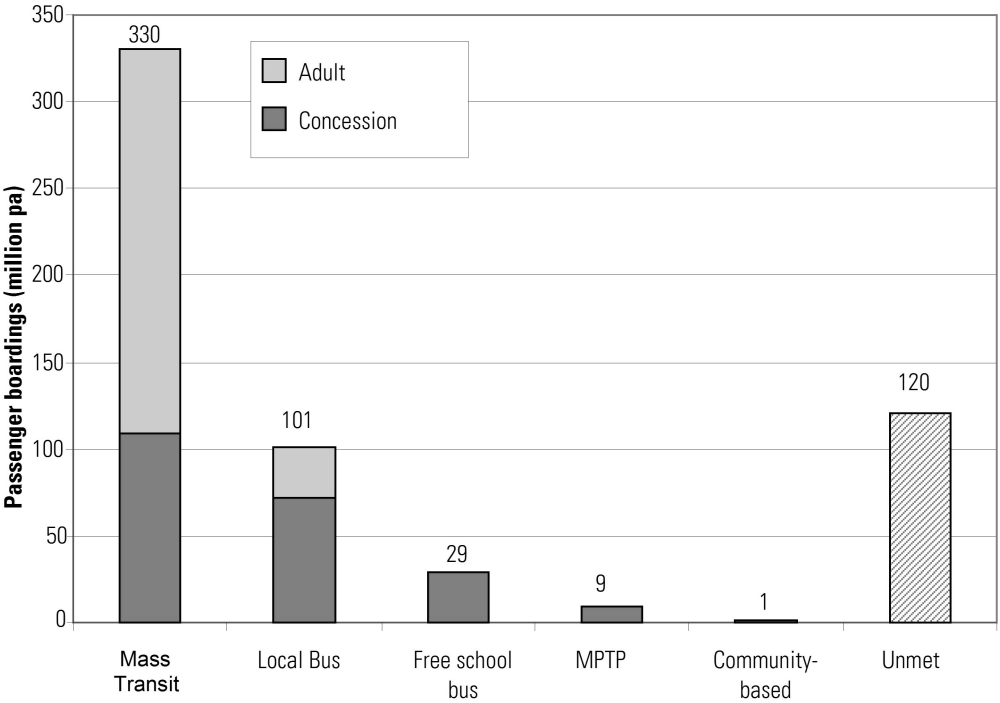

Figure 1 Social Transit in Victoria (2005–06)
Source: Department of Infrastructure. 2006 Internal document

In Victoria, there is a range of publicly provided transport services currently available:

- 'Mass Transit' services are provided in markets where public transport is a most efficient mode of transport. As the term implies it is a transport network that services a high volume market. In comparison, 'social transit' refers to sections of the community that have limited or no travel options. In Victoria, public transport includes an integrated ticketing system that allows access to public transport services comprising suburban rail, trams, buses and some rural services. Everyone including those who are socially and transport disadvantaged can also use these transport services. For example, 33 per cent of transport users travel on concession tickets.
- Local bus services are provided in the suburbs of Melbourne and larger country towns to provide basic levels of access. Concession cardholders account for 75 per cent of travel on these services.

- Free school bus services are provided in rural areas to ensure children can get to schools.
- The Multi-Purpose Taxi Program (MPTP) provides a 50 per cent subsidy for taxi transport (with the level of expenditure capped for individual trips and on an annual basis for some categories of users) for those unable to use mainstream public transport due to severe and permanent disability.
- Local councils and other agencies provide various community-based transport services that are generally targeted at groups with health needs and mobility problems.

Across Australia, in most cases the responsibility for addressing transport disadvantage is shared across the three tiers of government. In the main, the Federal Government provides special transport assistance, particularly in the health sector; the states are responsible for funding and delivering public transport services; and local government supports community transport by receiving state and federal funding to provide services to the frail, elderly and disabled.

WHY IS THE ISSUE IMPORTANT FOR VICTORIA?

Population ageing, urban sprawl and economic changes are the main factors that are increasing the level of interest in the social transit agenda in Victoria. These factors are complex and interrelated.

POPULATION

AGEING

By 2051, Victoria's population is expected to rise to 6.6 million representing an increase of 32 per cent on 2004 figures (ABS 2005). Consistent with the national trend, Victoria during this period will also experience low levels of fertility and an increase in life expectancy, resulting in an ageing population.

In 2001 approximately one in eight Victorians were aged 65 years or more. By 2021, almost one in four Victorians will be over 65 years old as shown in Figure 2.

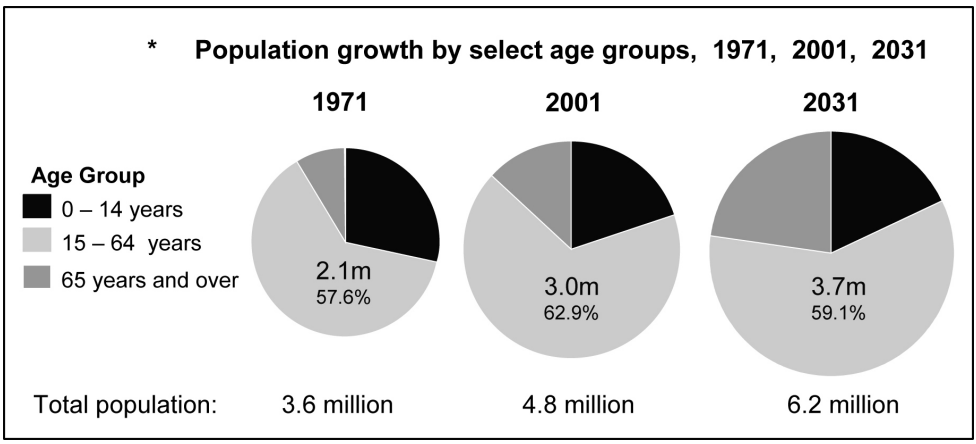

Figure 2 Population Growth
Source: Department of Sustainability and Environment 2004a

Victorian men, aged 60 in 2001, can expect to live for a further 21 years, with 17 of these years being in good health. In comparison, Victorian women aged 60 in 2001 can expect to live for 25 years, with 20 of these being healthy (Department for Victorian Communities, date unknown). Thus, there will be both an ageing and feminisation of the population.

This in turn will place greater demands on services provided by government. These demands will change as baby boomers move through the different phases of ageing.

At one end of the spectrum, there will be those older people who will have diminished access to transport because they are frail, vulnerable and have more health related problems. In 2003, the Australian Bureau of Statistics (ABS) identified 157,000 Victorians aged 60 and over that needed assistance with transport (ABS 2003). Older people's reduced ability to be independently mobile and to access transport will affect their ability to access services; attend events; and visit friends and relatives. This in turn will affect their wellbeing and increase the risk of becoming disadvantaged.

Deteriorating health associated with ageing will result in many older people giving up their driving licenses. As the population ages the transition from driving to non-driving becomes a key policy consideration. This particularly underlines the importance of good urban design and proximity to a mix of services.

Many senior Victorians, however, will remain active, mobile and able to access services and facilities. As the population ages and labour shortages begin to emerge, these seniors may retire later. More research is needed to understand better the future transport needs of these Victorians.

RURAL/REGIONAL VICTORIA

The total population for regional Victoria is expected to grow from about 1.3 million in 2001 to 1.9 million to June 2031 as shown in Figure 3.[2] This growth is partly due to sea-change and tree-change lifestyles, which involves relocating from the city to country or coastal areas by employed people, with and without families, and retirees.

As the population grows, rural/regional communities will face a number of challenges. This includes an ageing population across the region and long distances that people need to travel to access services and facilities. Many small remote communities are declining, due to an ageing population, the drought and the loss of agricultural employment, resulting in people moving to regional towns, that leads to social and transport challenges.

As a result, there will be a growing demand for travel between Melbourne and the regional centres. It is anticipated that in future 70 per cent of Victoria's economic activities, including many specialised services, will be concentrated within the metropolitan area and access to Melbourne will be a major issue for those living in provincial Victoria (Department of Infrastructure 2006, p. 12).

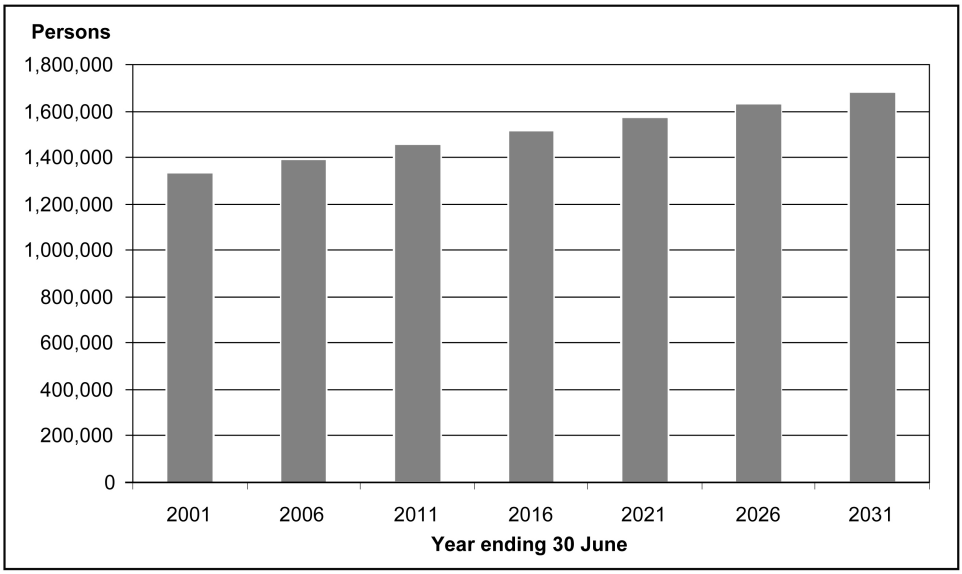

Figure 3 Projected Population Growth for Regional Victoria: 2001 to 2031
Source: Department of Sustainability and Environment 2004b

URBAN SPRAWL

Melbourne has grown as a low-density city and, despite land use policies to contain sprawl, new suburbs will continue to develop on Melbourne's fringe.

Since the 1950s, urban development has often occurred remote from the established rail networks. The car now is the main mode of transport in all Australian States, due to the relative affordability of owning a car, cheap petrol, available serviced land and an enduring consumer preference for living in single family homes on a suburban block (despite an increase in apartment living, particularly in Melbourne). Figure 4 illustrates the extent of Melbourne urban sprawl in last 50 years.

Melbourne continued outward low-density development creates numerous servicing challenges. The literature highlights a range of examples where new developments have occurred without adequate provision made for services, especially public transport. These areas experience above average rates of crime, mental health illness, unemployment, lower education levels and poverty, though not necessarily as the sole result of transport disadvantage.

The Government has recognised the environmental and social costs of urban sprawl and has designated five Melbourne fringe growth areas that are at greatest social risk.[3] These are Wyndham, Melton-Caroline Springs, Casey-Cardinia, Hume and Whittlesea as shown in Figure 5.

Further, these new growth areas have limited local public transport. Figure 6 highlights that people in the growth areas that do not have a car are transport disadvantaged with regard to access to jobs, and likely to be similarly disadvantaged in terms of other activities and services.

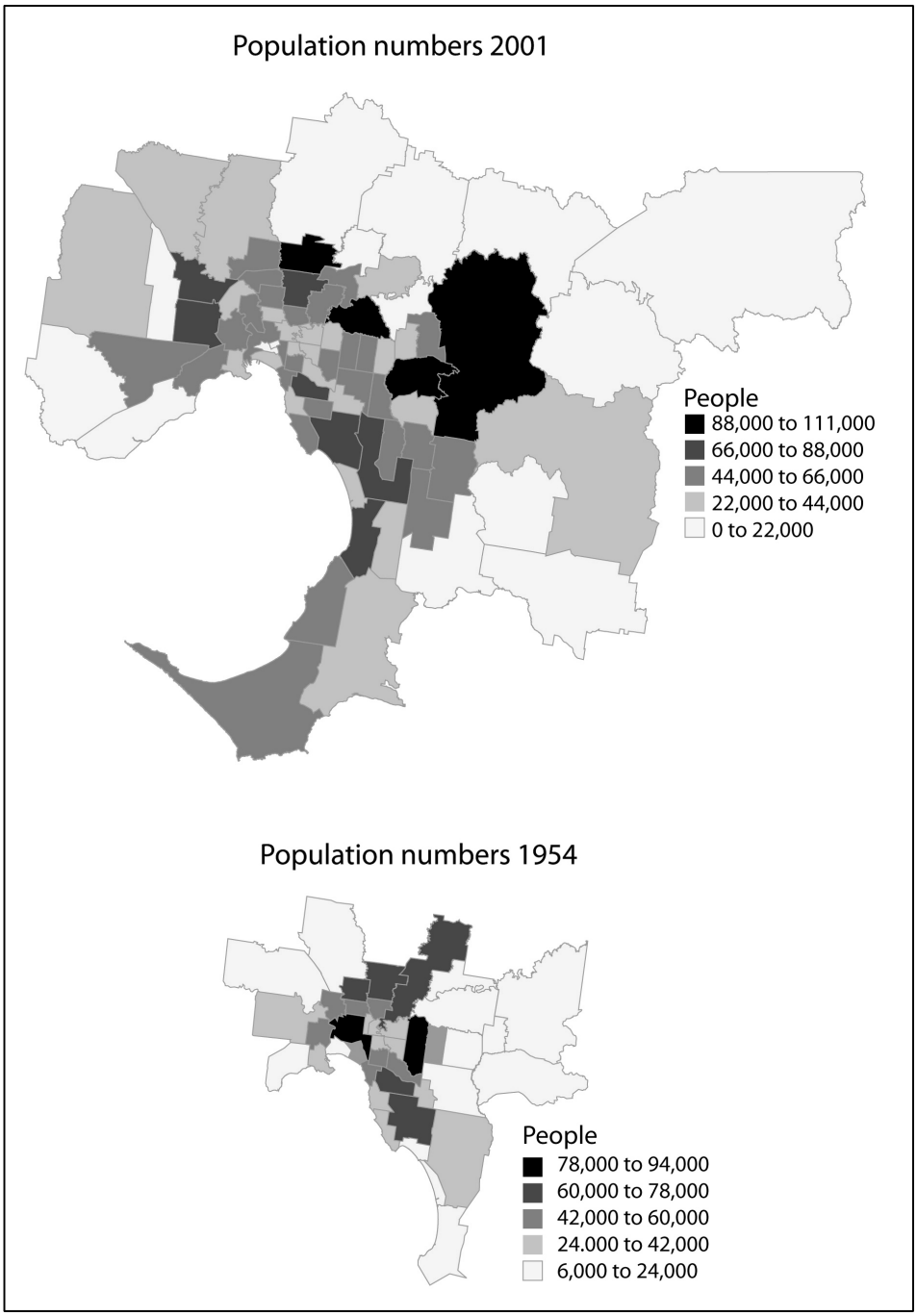

Figure 4 Total Population 1954 and 2001
Source: Department of Sustainability and Environment 2006a, p. 1.3.

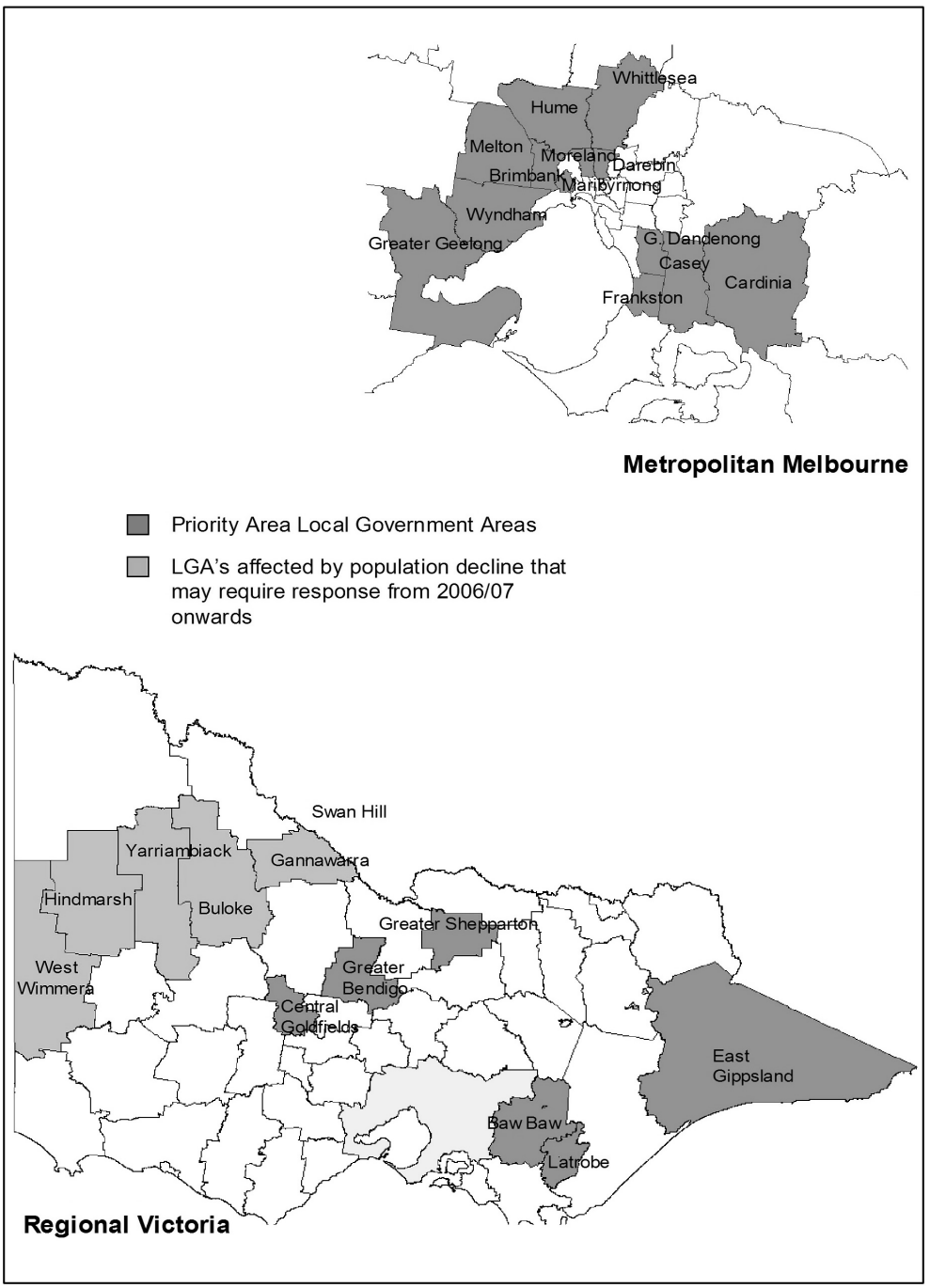

Figure 5 Social Policy Statement – Priority Areas for Additional Support
Source: Department of Infrastructure. 2006 Internal document

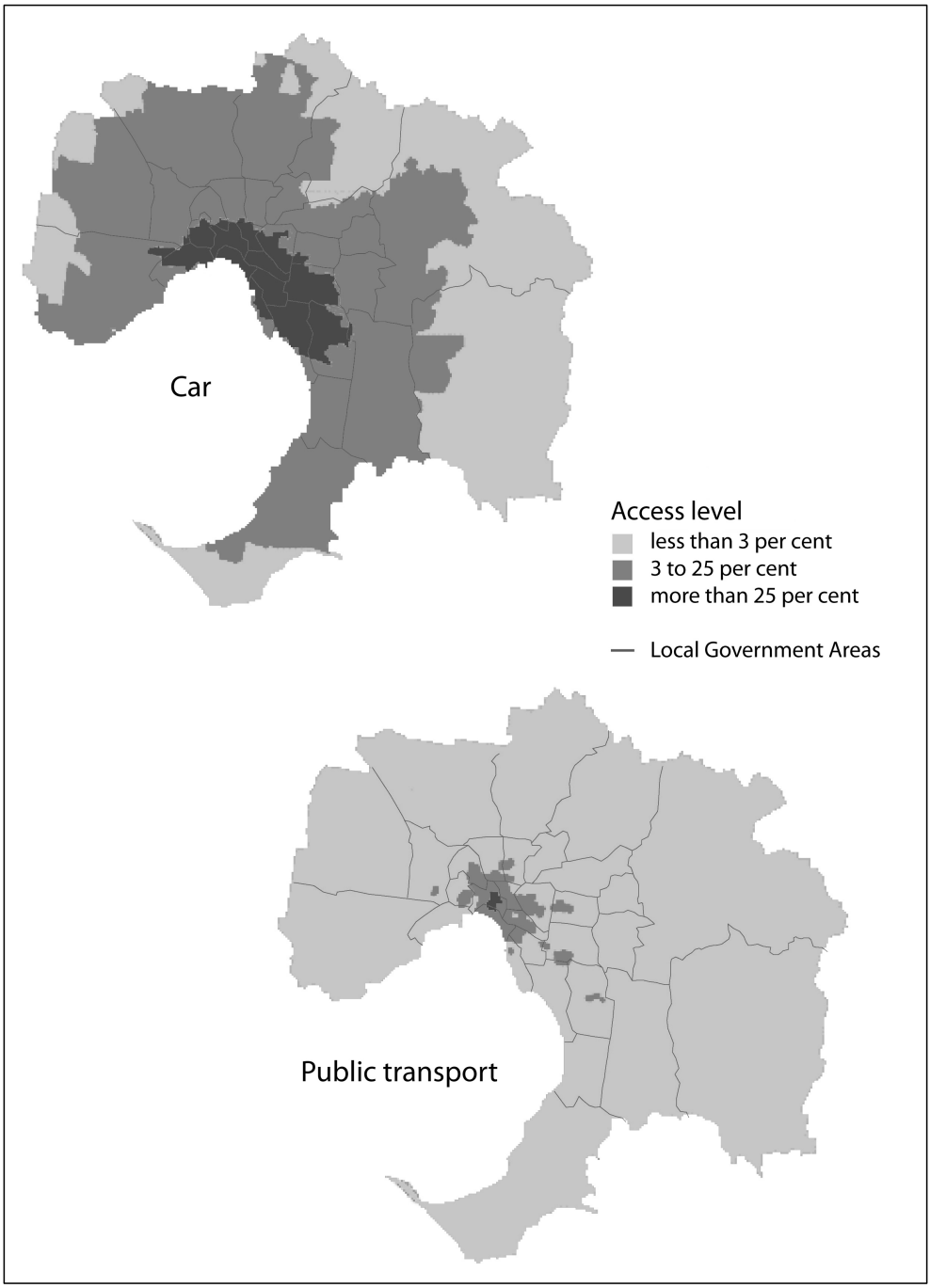

Figure 6 Jobs within 40 mins of Travel by Car and Public Transport
Source: Department of Sustainability and Environment 2006a, p. 6.14.

CHANGES TO THE ECONOMY

OIL PRICES

Higher petrol prices most adversely affect those on low incomes, the socially disadvantaged and those who cannot easily access or use public transport.

Generally, people who live in the outer suburbs and regional Victoria have fewer transport options and are likely to be most affected by rising petrol costs because of their dependence on motor vehicles and limited access to public transport. For example, outer suburban households of Melbourne spend an average $233 travelling to and from work, more than 1.5 times higher than residents with better public transport options in inner Melbourne.

The vulnerability of people who are transport and/or social disadvantaged is highlighted in the work of Dodson and Sipe (2006). This work outlines the impact of oil prices on mortgages and on transport through the 'Vulnerability Assessment for Mortgage, Petrol, Inflation Risks and Expenditure (VAMPIRE)' index. Dodson and Sipe found that households with mortgages residing in outer-suburban locations in Australian cities would be most adversely affected by rising fuel costs, in large part because of their exposure to housing debt and the poor quality of alternative travel modes to the private car. In contrast, wealthier inner-urban and middle-ring localities appear less vulnerable to increasing petrol prices, due to relatively higher incomes and greater availability of public transport. This trend is confirmed for Melbourne by Dodson and Sipe (2006, p. 34).

INDUSTRY AND EMPLOYMENT PATTERNS

Since 1980's Victoria has experienced considerable industrial changes due to the pressures of globalisation and increased competition from countries that offer cheaper labour and products. The manufacturing sector has experienced a steady decline while the service and information sectors have grown.

These changes have contributed to changes in travel demands and patterns, which give rise to new transport issues. In 1971, 30 per cent of employment in Melbourne was located in the City of Melbourne and was supported by the radial transport system. By 2001, this figure had dropped to 19 per cent, with employment more widely dispersed throughout the suburbs as indicated in Figure 7.

The casualisation of the labour force, especially in the service sector, has implications for travel demands and patterns. In 2003, 26 per cent of Australian employees were in casual jobs, compared with 22 per cent a decade ago. Young people in transition from education to work are particularly affected, as two-fifths of casual employees are young people aged 15–24 years. Many of these jobs have an early start or a late finish and in many cases public transport services do not operate at these times. Until recently, nearly half of the metropolitan bus routes did not operate before 6am or after 7pm. This problem is much worse for youth trying to get to part-time or casual jobs in rural and regional Victoria.

Similarly, economic changes have seen removal of some services that communities rely upon. Rationalisation of bank branches in the suburbs and in country towns are a prime example of this, making them less accessible for people who have difficulty in travelling other than local journeys.

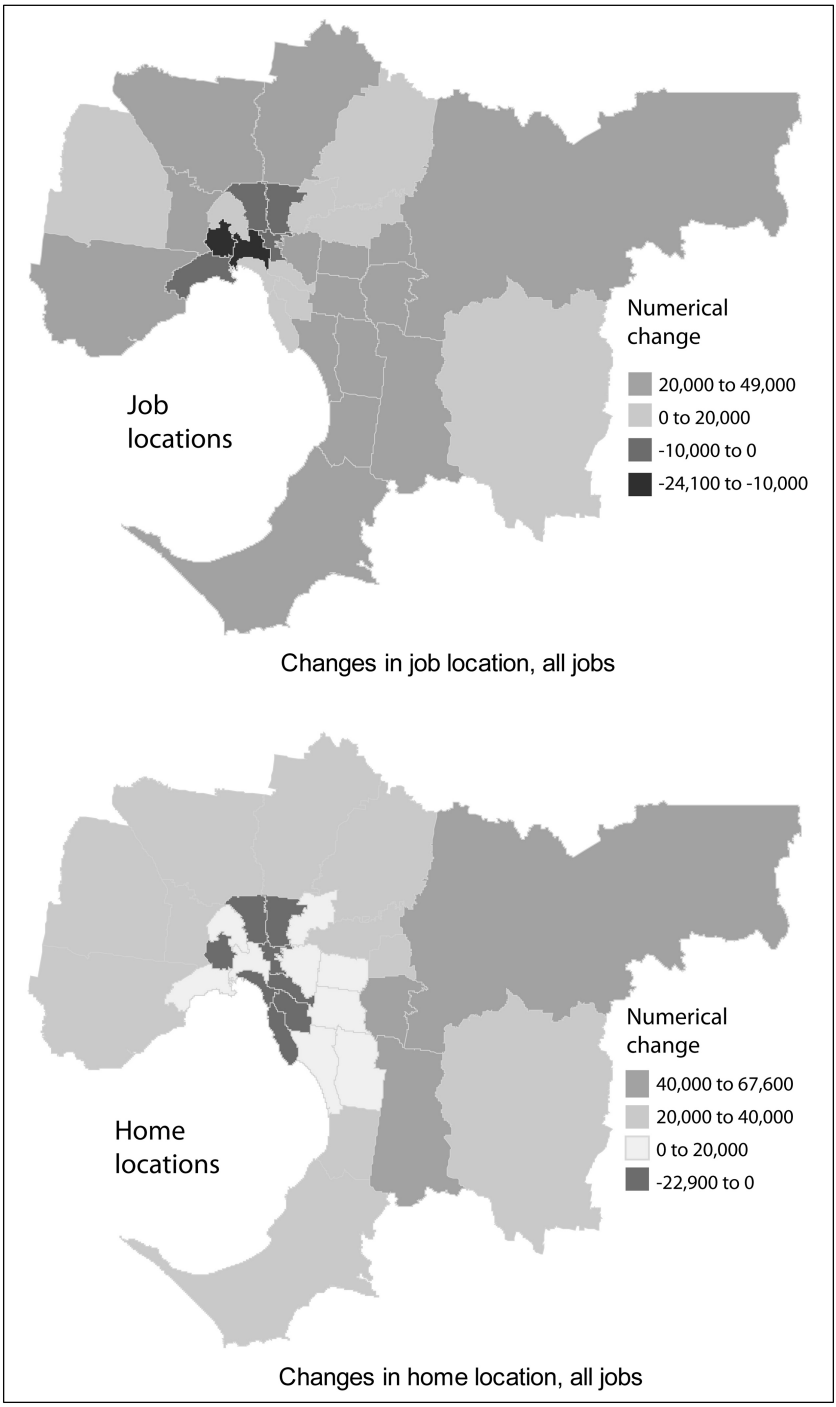

Figure 7 Changes in jobs and home locations of employed people
Source: Department of Sustainability and Environment 2006a, p. 4.9.

THE ROLE OF THE INDIVIDUAL AND THE ROLE OF THE STATE

The role of government is to facilitate and provide services to the community at large, while respecting that individuals will make their own choices as to where they work, live and travel. A person may be attracted to a quiet and remote a location for its natural beauty or a lifestyle, as demonstrated by sea/tree lifestyle changes. They may move there in good health and with good personal mobility, but ageing or illness can lead to subsequent isolation.

There is a section of the community that has no or very limited choices as result of family, economic and social factors. Nearly one in four metropolitan Victorian households and over one in three regional Victorian households rely on social security as their primary source of income (ABS 2002b). Their low levels of income determine how much they can afford to spend on transport. Cheaper rent in the outer fringes or regional Victoria is preferred despite limited transport options.

A question can therefore be asked: should government assist those who choose to live in areas where services are lacking? How a government chooses to address this question depends on its economic, social, political and philosophical position.

In 2005, the Victorian Government released *Challenges in Addressing Disadvantage in Victoria* that outlined its position to provide a fairer opportunity for all citizens. In particular the Government states that a 'strong, progressive and prosperous society is founded on fairness; on each and every person having a fair opportunity to participate in the social and economic life of community' (Department of Premier and Cabinet 2005b, p. 1). The subsequent transport initiatives in support of this policy will be discussed later in this chapter.

THE MASS TRANSIT AND SOCIAL TRANSIT AGENDAS

An early step within governments in Victoria was to recognise that there are two equally valid and parallel, but sometimes conflicting, policy agendas for providing public transport services.

The traditionally recognised role is in efficiently managing mass movements of people. In this case, mass transit is concerned with providing public transport in markets where it is the most efficient mode of transport. The policy objective is to increase mode share to:

- provide transport options that most efficiently meet the travel needs of a large proportion of the population; and
- mitigate the adverse impacts of unnecessary reliance on car travel:
    - to reduce levels of road congestion, particularly in and around central Melbourne and other key Activity Centres, thereby facilitating the movement of freight and other high value road users;
    - to facilitate economic development in central Melbourne and other key Activity Centres;
    - to improve the liveability of Melbourne by better managing the environmental and social impacts of car travel; and
    - to mitigate the impacts of potential increases in oil prices or oil shortages.

The mass transit market is characterised by travel demands that are concentrated geographically and temporally. Most commonly this means travel to, from and within inner Melbourne and, to a lesser extent, suburban activity centres. The majority of users are those who have choices but use public transport because it is the most efficient transport option available to them.

In comparison, there is now recognition that there are sections of the community that have few or no travel options. The new agenda of social transit is concerned with providing public transport to this market. The policy objective is to reduce levels of social exclusion by removing or lowering the barriers that hamper access to the range of activities and services that those with access to a car can enjoy.

The types of journeys undertaken by this market are generally dispersed in space and time and often, but not necessarily, are of a local nature. Users may be reliant on public transport as a result of their financial position, their age (either too young or too old to drive) or a physical disability. Flexible transport solutions (i.e. where the service schedule and/or the route may be varied to meet customer needs) are sometimes required.

Table 1 illustrates the key characteristics of both markets.

Mass Transit	Social Transit
'Travel is a good thing which helps the economy, but some types of travel – like cars – impose costs on the environment and create congestion.' 'Cars are okay, but in some markets, public transport imposes lower external costs and reduces congestion.' 'The trick is to get people to use it.'	'Mobility is a good thing and in an equitable society everyone should have reasonable access to transport options.' 'As Melbourne has grown, public transport has failed to grow with it. In many outlying areas, people without access to cars are deprived of travel options. This is unfair.'
• Improve reliability of trains and trams • Reduce overcrowding (eg, rail capacity) • Create new services for emerging mass transit markets (eg, SmartBus) • Promote the availability & convenience of public transport to the people who are most likely to switch over to it	• Improve service levels in areas of Melbourne which are 'transport poor' • Ensure that people in regional Victoria have access to decent public transport • Provide travel options for people with mobility impairments

Table 1 Comparison of Mass and Social Transit
Source: Department of Infrastructure. 2006. Internal document.

Until recently, the social transit policy arguments were (largely unsuccessfully) forced into the mass transit agenda by attempting to apply common approaches to project evaluation and prioritisation. As a result, new investments in transport services to meet social needs were largely overlooked.

THE APPROACH OF THE VICTORIAN GOVERNMENT

Despite there being gaps in the understanding of the underlying relationships between transport and social disadvantage, the Victorian Government has embarked on a program of policy development and new funding initiatives to reduce barriers to access and mobility.

The Government's *A Fairer Victoria* (2005) provides a high level policy framework to reduce disadvantage and increase opportunities for all Victorians. It outlines key actions to:

- improve access to vital services;
- reduce barriers to opportunity;
- strengthen assistance to disadvantage groups;
- provide targeted support to high risk areas; and
- support and encourage communities in decision making (Department of Premier and Cabinet 2005a, p. 5).

This was accompanied by a number of new initiatives in the 2005 and 2006 State Budgets and followed by a transport policy statement, *Meeting Our Transport Challenges*, which placed a strong emphasis on social outcomes. The major policy initiatives aimed at addressing the transport disadvantage issues arising from urban sprawl, ageing of the population and changes in the economy are summarised below.

MORE SERVICES

The approach to date has been to expand 'mainstream' transport services rather than provide targeted services. This is based on the premise that disadvantage is experienced broadly and solutions need to be broad and inclusive.

The focus until recently was placed on geographical service coverage with the aim of providing all households in 'built-up' areas with a public transport service within 400 metres from their front door. In Melbourne, coverage of 90 per cent of households has been achieved with funding committed to extend services as new suburbs develop. Some 10 per cent of households remain unserviceable, generally due to historic subdivision designs that do not allow for bus operations.

The current focus is on temporal service coverage, recognising that the transport needs of many individuals fall outside the hours traditionally provided for 9–5 work commuters. Services are being upgraded to operate on all routes 7 days a week. On major routes this will mean services start operating from 6am to midnight and on minor routes from 6am to 9pm.

In rural and regional areas, in addition to upgrading regional rail and local bus services, the approach is to provide flexible transport options such as the Transport Connection Program. This scheme employs local co-ordinators to communicate with communities to assess their local transport needs in rural and remote areas in Victoria. It makes better use of existing resources, facilitates dialogue between the community, transport providers and local businesses about transport needs and opportunities, and strengthens links between community and public providers. Typical initiatives include Buchan Bus 'n' Freight Service, which is a flexible passenger and freight operation. People living in Buchan can either travel to Bairnsdale to shop, visit friends and family or make use of services not available in Buchan. Alternatively, they can ring Bairnsdale supermarkets, order their goods and arrange with Buchan Bus 'n' Freight to collect groceries and deliver them to their door for a small fee.

In total, some A$1400 million has been committed to expand service availability over the next 10 years.

MORE ACCESSIBLE SERVICES

Transport services are only helpful if they are accessible for people with restricted mobility, such as older people, people with disabilities and parents travelling with children.

National legislation requires that services be made increasingly accessible for people with disabilities.

State and local government in Victoria has committed to a Public Transport Access Program to meet, and in many areas exceed, the legislative requirements. Improvements being made under the program include:

- *Metropolitan train services* – access paths, ramps, surfaces, handrails and grabrails, stairs and tactile ground surface indicators (TGSIs).
- *Tram services* – upgraded platform tram stops built primarily in medians, more accessible rolling stock, tram right of ways, wide safety zones where traffic impact would be minimal, and some upgraded platform stops in high use locations.
- *Bus services* – access paths, surfaces and TGSIs.
- *V/Line Passenger services* – access paths, ramps, waiting areas, surfaces, handrails and grabrails, lighting, controls, furniture and fittings.

In total, some A$250 million has been committed for infrastructure works to make public transport more accessible over the next 10 years and $1680 million for Disability Discrimination Act compliant rollingstock.

MORE AFFORDABLE SERVICES

Already concession fares are used by 45 per cent of public transport users. The concession is typically 50 per cent of the cost of a ticket. Special attention has recently been given to two aspects of affordability.

Firstly, there was concern that transport costs were impacting severely on low income families living in Melbourne's fringe suburbs. The outer metropolitan Fare Zone was abolished and fares on country trains were cut so that travel costs were reduced by 20 per cent or more for outer residents.

Secondly, the Victorian Government has implemented a range of pricing initiatives to reduce the costs of public transport travel by senior Victorians.

In total, some A$230 million has been committed to making public transport more affordable over the next 10 years.

SUMMARY AND OPTIONS FOR THE FUTURE

In earlier times, with a city built around a rich network of public transport services, the public transport system was largely successful in servicing both the 'mass-transit' and 'social-transit' markets described in the chapter. However, increasing rates of car ownership and usage in the last 30 years, subsequent expansion of the metropolitan area with new development occurring in areas beyond the reach of existing public transport services, continued population growth, the changing nature and distribution of employment and the changing travel and activity behaviour of people themselves, have collectively put pressure on the traditional public transport model.

Over this period the expectation of equitable service provision has also increased, particularly following the implementation of the Australian Government's Disability Discrimination Act 1992.

As highlighted, recent government responses to the issues of public transport provision have focussed on extending the availability and affordability of services by upgrading traditional fixed-routes and fixed-schedule networks. Significant investment has been made in providing additional routes, longer service spans, improved physical accessibility and more affordable fares. These measures are clearly of benefit to all public transport users, including those who may be socially disadvantaged.

For some transport-disadvantaged people – the 10 per cent of metropolitan households that are not within a public transport catchment; the 200,000 individuals with severe mobility constraints; the growing proportion of older people; and isolated communities in rural and regional Victoria – further mobility solutions are not as clear. Transport for these groups have historically been provided by a combination of federal, state and local government programs, health agencies and community transport providers, through to informal solutions involving relatives and friends. In some instances, this targeted support will lead to excellent levels of service. However, there is a risk that the investment may still exclude some individuals, or may not adequately meet their transport needs.

As governments respond to the growing access and mobility needs of Victorian communities, they will need to adopt a broader view of the interrelationships between the transport and social policy frameworks. This will require acknowledgement that investment in traditional public transport cannot deliver mobility options to the entire population. Instead, a continuum of potential transport approaches may be required, not just filling 'service holes' but also overlapping to form an integrated and complementary network.

This could include the more flexible use of buses to provide door-to-door services. For lower patronised routes and subdivisions that are more difficult to navigate, taxis and other vehicles could potentially take the role of the bus. Local area audits can be used to identify the range of transport resources available to a community, as well as specific transport needs. Increased access or utilisation of community vehicles may help sustain services, or free up duplicating resources for other purposes.

The roles and responsibilities for funding transport remain open for debate. The expenditure across different government departments for transport services and subsidies could arguably be pooled. Essential transport services provided by non-government agencies and organisations should be included in reviews.

Through a better understanding of local access and mobility needs, and the impact of transport on the health and wellbeing of the community, government can more effectively and efficiently deliver the broad range of social outcomes demanded by the community. New approaches and thinking to the questions asked in this chapter will assist government in future policy development and in shaping the social transit agenda.

ENDNOTES

1 Department of Infrastructure estimates were based on the following assumptions:

(a) The percentages from the General Social Survey (i.e. 3.8 per cent of people that had serious transport access problems and 11.6 per cent of people that sometimes had transport access issues) were assumed the same for the general population. So 3.8 per cent x 5 million people plus 11.6 per cent x 5million = approx. 800,000 people.

(b) The estimated unmet trips for those who sometimes had difficulties accessing transport was assumed at 6 boarding per week and those who had severe problems accessing transport was assumed at 2 boardings per week. Therefore (3.8 per cent x 5 million people x 6 boards x 52 weeks) plus (11.6 per cent x 5 million people x 2 boards x 52 weeks) = approx. 120 million trips per annum.

2 Department of Sustainability and Environment 2004b, *Regional Victoria: Your Questions Answered*, p. 1.

3 The Government identified these areas by analysing a range of indicators that include income, employment, mortality, and health as measure of social participation (Department of Premier and Cabinet 2005b).

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SOCIAL POLICY AND PUBLIC TRANSPORT

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The concept of social exclusion, as it relates to transport, has not generally progressed beyond transport disadvantage and improving mobility and accessibility. This chapter argues that a fuller understanding of the role of transport should incorporate impacts in areas of social capital, community strengthening, social governance and wellbeing. These issues are illustrated through a case study of the transport needs of socially excluded groups. The authors believe there is a strong argument for the development of measurement of these concepts, thus leading to a clearer understanding of how achieving the goal of inclusion should promote multiple transport, social and economic outcomes.

INTRODUCTION

Typical public policy goals for transport systems have, for some years, included economic, environmental and social outcome dimensions, with more recent interest in a quadruple bottom line 'governance' goal. Thus strategic policy goals for an urban transport system (for example), might appear something like the following:

1. economic – reduce the costs of traffic congestion; perhaps encourage a more dynamic urban economy, a policy goal frequently adopted in North America; ensure publicly supported transport systems/services are provided cost-effectively;
2. environmental – ensure vehicle emissions are consistent with air quality goals (e.g. particulate emissions) and vehicle greenhouse gas emissions are consistent with Kyoto targets;
3. social – improve the safety of the transport system and ensure that a decent basic mobility level is available to all (sometimes called an equity goal), particularly those groups of people who have few mobility choices and are therefore at risk of social exclusion;
4. governance – ensure that key stakeholders have the opportunity and capacity to contribute to transport policy/program development and that government structures are in place to facilitate and incorporate their input into a coordinated approach.

Economic, environmental and safety outcomes of transport systems/services have generally been amenable to various forms of quantitative analysis for some years. Thus, for example, mass transit proposals can be assessed for their prospective impacts on traffic congestion, air quality, climate change and road safety outcomes. The same cannot be said of outcomes in the area of social inclusion or, indeed, of the governance goal. These are not fully understood, let alone defined in measurable terms.

A value perspective on the need for basic levels of mobility to be available to all (a part of the social goal) does not take one far in terms of defining more clearly just what levels of mobility are required in particular circumstances. What are the benefits to individuals and society of good

mobility? Should there be some basic minimum irrespective of location or should remote regional areas be treated differently to regional cities and to the outer urban fringes? How can you determine what a basic level of mobility ought to be for different groups? Does it differ according to the circumstances of the person (e.g. age, disability, income etc.)? What measures can be put in place to achieve the social equity goal, outlined above? Similarly, what are the desired levels of input into transport planning and development from citizens and non-government organisations? How is planning best integrated between the levels of government and non-government voices? What process should be in place to feed this information back into program and policy development? How can benchmarks be established?

It was questions such as these, and a lack of apparent answers, that prompted the authors to undertake some initial investigations into the roles that access/mobility play in community and individual welfare and to explore the role that public transport, in particular, might perform in promoting social inclusion and participation. These investigations have shown that public transport policy may be partly driven by seeking to provide improved travel opportunities for groups who are regarded as 'transport disadvantaged' but that is about as far as it goes. There appears to be no systematic framework within which such initiatives can be considered and evaluated in terms of their ultimate contribution to community or individual wellbeing. Equally, approaches to pursuing the governance goal have been found to be in their infancy and lacking any clear directional guidance to policy makers or practitioners.

This chapter explores the concept of social exclusion/inclusion, outlining how this has been used in a transport context. It finds that social exclusion has not generally moved beyond the concept of transport disadvantage and improving mobility and accessibility. It argues that a fuller understanding should incorporate impacts in areas of social capital and community strengthening, and in the developing conversations in relation to wellbeing and happiness. These issues are illustrated through case studies of the transport needs of socially excluded groups.

The chapter then considers how social governance concepts might be applied within the transport sector, targeting social exclusion and drawing on place-based approaches to service integration. It illustrates this with examples of governance failure in use of community transport for particular disadvantaged or socially excluded groups. Ironically, this highlights a risk that community transport may even promote or reinforce social exclusion.

The analysis suggests that placing social inclusion and social governance goals more firmly on the policy agenda is likely to provide multiple benefits to groups with mobility disadvantage, as well as to other travellers, public transport providers and government. It should also progress environmental and economic goals, such as through contributions to reducing congestion and improving service delivery efficiencies.

TRANSPORT AND SOCIAL EXCLUSION

Social exclusion, in the social policy literature, is a broad descriptor relating to the consequences of the existence of barriers which make it difficult or impossible for people to participate fully in society. The concept is presently in use in many policy contexts as a means of understanding equity issues.

Considerable work around the concept of social exclusion has taken place in the United Kingdom. The term was originally used to broaden understanding about poverty, particularly

unemployment. Under this concept, the inability of people to be fully participating members of society is viewed more broadly than only in terms of a shortage of money, to include other forms of disadvantage. Thus, people may be socially excluded due to disability, age, unemployment, lack of transport, race, etc. The logic of this approach is that the way of 'including' people with these disadvantages is not only, or even necessarily, to give them more money but also to develop social policies which specifically address their sources of disadvantage.

The Blair Government established the Social Exclusion Unit (SEU) in 1997, with transport being one of its early areas of concentration, with the primary focus being on issues of accessibility (SEU 2005). In the SEU's transport study, links were drawn between the exclusion of people who do not have access to a car, and their needs for education, employment, access to health and other services and to food shops, as well as to sporting, leisure and cultural activities.

Findings from the SEU's transport study have been organised into five groups of barriers which need to be addressed in order to improve accessibility to key services that are central to social inclusion and where there is a transport connection (Figure 1). These are:

1. The availability and physical accessibility of transport
2. The cost of transport
3. Services located in inaccessible places
4. Safety and security – fear of crime
5. Travel horizons – people on low incomes were found to be less willing to travel to access work than those on higher incomes.

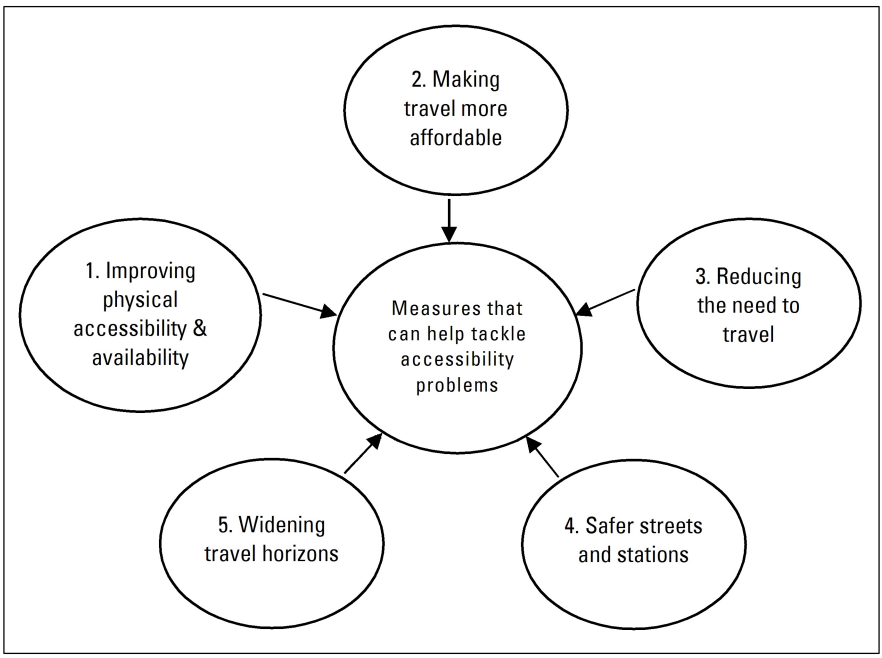

Figure 1 An Accessibility Planning Framework (drawing on SEU 2003, p. 6)

The SEU argued that to remove these barriers and reduce social exclusion through transport improvements, there is a need to understand how people access key activities and link this with planning to improve such accessibility (accessibility planning), as well as undertaking key strategic policy initiatives, such as:

- reviewing the regulations governing provision of bus services (especially relevant to the UK context where de-regulation of service provision has taken place outside London);
- integration of transport planning into planning for services provision (e.g. education);
- a range of initiatives to make transport more accessible, such as reducing cost and addressing the fear of crime associated with public transport;
- the formation of partnerships between transport providers, local authorities and local service providers, such as education and health, and work on transport solutions.

Following the work of the SEU, a few other studies have explored the association between social exclusion and transport. Hine and Mitchell (2003) cover much of the same ground as the SEU. They still largely define social exclusion in a transport context in terms of a loss of ability of people to connect with services such as 'health facilities, local job markets and leisure activities' (p. 6). They note that expressing accessibility in exclusion terms has the advantage of clarifying the multiplicity of issues which result in transport disadvantage, such as poor social planning and policy at society and institutional levels. They recommend a number of transport-related approaches to tackling social exclusion, such as targeting of subsidies and concessions and provision for public transport in new housing developments.

Both studies recommend various forms of coordination as a means of addressing social exclusion. The SEU suggests transport planning should be integrated with service planning and partnerships should be formed on the supply side, between transport providers, local authorities and local service providers, to improve delivery efficiencies and effectiveness. Hine and Mitchell propose coordination between public transport services and, seemingly separately, coordination between various community transport operations.

A number of other studies have also come from the UK, largely targeting accessibility around specific groups of people. For example, Cartmel and Furlong (2000) found rural youth are more likely to suffer social exclusion than urban youth, due to an inability to access basic activities such as health services, education and employment.

In short, accessibility has been an integrating framework for some UK work on social exclusion/inclusion. There is no attempt to go beyond this, however, and establish how such access improvements might increase the wellbeing of those involved. Improved accessibility effectively becomes the outcome to be achieved.

Bradshaw (2003) notes that the language of social exclusion is largely absent in discourse from the United States and it is understood that the same conclusion applies to Canada.[1] Although not operating from a social exclusion theoretical framework and language, however, our investigations show that there is a widespread interest in mobility issues faced by particular transport disadvantaged groups in North America (e.g. seniors and people with a disability) (Burkhardt et al. 2003). As with the UK, the conversation is largely around the need for transport disadvantaged people to access jobs, health care and recreation. Service co-ordination is a strong focus in

US research, mainly within the community transport sector (paratransit) and, less frequently, between community transport and public transport.

The concept of social exclusion has been slow to be adopted in Australia. While there has been discussion amongst some Australian academics (for example Jones and Smyth 1999), there has been little integration of this concept into social policy on any sizeable scale. However, pockets of interest in social exclusion appear to be widening, particularly in association with other social policy changes, such as placed-based policy (discussed further below). These include the place-based initiatives of the Beattie government in Queensland, which commenced in 1998, and the establishment of the Social Exclusion Unit by the South Australian State Government in 2002. The Department for Victorian Communities, established in 2002, while placing social policies more firmly on the state government's agenda, uses the language of 'addressing disadvantage' and 'fairness', rather than the language of social exclusion (Victorian Government 2005). However, the philosophies behind the work of the Department for Victorian Communities appear to cover similar ground to that subsumed in the concept of social exclusion.

There has been little application of social exclusion concepts within the transport field in Australia, until very recently. However, the concept of transport disadvantage has been recognised in some transport planning initiatives (as in the US). Groups who are often seen as transport disadvantaged, in the sense that they have poor access to transport, often tend to coincide with those groups seen as at risk of being socially excluded: young and older persons, people with a disability, low income groups, Indigenous people, refugees/new migrants and rurally remote people. Alsnith and Hensher (2003) and Harris (2005) have researched transport issues for seniors and Currie et al. (2005) have worked on accessibility to transport for youth in rural and regional Australia. By implication, measures to reduce transport disadvantage are highly likely to improve social inclusion, although the links have not been drawn out.

A WIDER UNDERSTANDING OF SOCIAL EXCLUSION

To a large degree, work on transport and social exclusion has been a conversation about accessibility in a narrow sense, about the need for people to obtain goods and services and get to work, school, recreation, etc. While this issue is of considerable importance, in itself, there does not appear to have been any attempt to go further and examine:

- possible links between improved accessibility and the development of social capital and community strengthening, which provides an additional means of fostering social inclusion; and,
- the links between improved accessibility, social inclusion and wellbeing.

While accessibility to transport facilitates the procurement of a service, by doing this, it may also facilitate the development of social networks, or connections amongst individuals. This leads to the development of social capital, or the norms of reciprocity and trustworthiness between people (Putman 2000). The building of social capital binds networks of people who cooperate to resolve collective problems, promoting personal and business interactions and widening awareness of others and flows of useful information (Putman 2000). Good levels of interaction between people promotes a sense of belonging and strengthens communities. This in turn builds capability and capacity in the community, such as leadership skills, participation in community

organisations, volunteering pride, a sense of safety and wellbeing, as well improvement in factors such as 'school retention, employment, transport, family stability and crime prevention' (Department for Victorian Communities 2005).

Figure 2 depicts the mainstream thinking of how improved accessibility might lead to (for example) employment of a previously unemployed person, with the associated benefit of improved social inclusion. It also suggests an indirect path to social inclusion, by which improved accessibility leads to growth in social capital/community strengthening. In turn, the enhanced social networks thereby created may themselves assist the person to achieve employment and inclusion.

The provision of transport may be the means to directly link an unemployed person with employment. Alternatively, transport accessibility may enable people to form associations or relationships and engage with other people and groups. This, in turn, may lead to increased job prospects, as most employment is obtained through personal contacts. This can be understood in terms of the development of social capital, which, in itself, leads to improved health, wellbeing, and happiness. The act of being on public transport, in itself, may directly improve social capital, as travel offers opportunities to engage with other travellers. The establishment of personal networks (through the transport link) may in turn lead to employment opportunities.

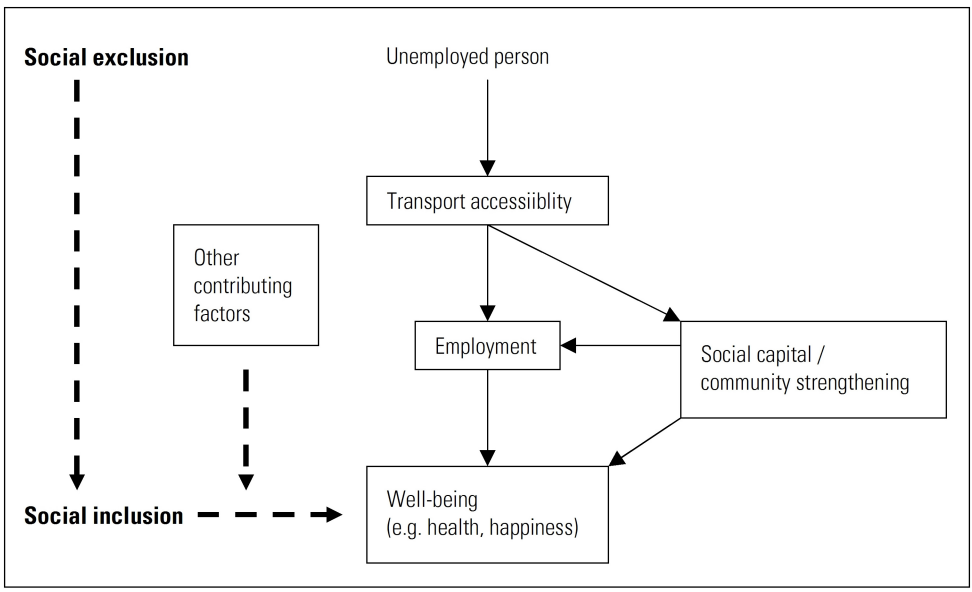

Figure 2 The roles of accessibility in leading to social inclusion

The second 'shortcoming' of the present approach is that reducing social exclusion is effectively seen as the end-point goal of a policy process. The authors believe that reducing social exclusion per se is not the ultimate policy goal, which should instead be couched in terms of enhancing individual/community wellbeing, an approach more consistent with a welfare economics analytical framework.

Figure 2 thus suggests a link between improvement in transport, social inclusion and notions of wellbeing and happiness (see Ryan and Deci 2001, Layard 2005). Both these concepts are

currently attracting considerable interest in the psychology literature. Although the conversations are from difference disciplines, as with the sociologically based notions of social capital, the literature on wellbeing and happiness is recognising the 'fundamental importance of warm, trusting, and supportive interpersonal relationships for wellbeing' (Ryan and Deci 2001, p. 154).

Figure 2 also indicates that there are, of course, many factors that contribute to health, happiness and wellbeing. Extra income is associated with increases in happiness – but only to a certain point when diminishing returns may set in (Layard 2005). Also included are the attainment of strong attachment relationships, age-appropriate cognitive, interpersonal and coping skills, and exposure to environments which empower a person (Cowen 1991).

THE WARRNAMBOOL CASE STUDY

Our assertion that the link between transport and social exclusion needs to be taken further arose partly from our study into the needs of groups of people at risk of social exclusion in Warrnambool, a regional centre of about 35,000 people on the coast in rural south-west Victoria, Australia (Stanley and Stanley 2004).

In contrast to the SEU's transport study, the Warrnambool study did not attempt to define the parameters of social exclusion in terms of accessibility to specific services: education, employment, access to health and other services and to food shops, as well as to sporting, leisure and cultural activities. Instead, it set out to explore travel needs of transport disadvantaged groups as they, and people representing their interests, saw them, as well as gathering some comparative information on those without such disadvantage. The study clearly showed the importance of accessibility to services for groups at risk of social exclusion, in line with the work of the SEU and others, but it brought home strongly how the value of access improvements for socially excluded groups may be substantially greater than for groups who are already included.

A shopping survey, where car use clearly dominated travel mode choice, together with a small household survey, showed the strong attachment to the car in the region and the high level of mobility it provides. Car use frequently involves travelling in groups, indicating an important social benefit from such travel in terms of developing social capital. Car users tended to make more trips than those who were transport disadvantaged, even though transport disadvantaged groups tended to engage in slightly more activities per trip. This was suggestive of a higher degree of inclusion of car users, associated with their higher level of mobility in a community where travel alternatives are quite limited.

Route bus users were interviewed. Four out of five day-time bus travellers saw they had no other travel alternative, two out of three having no car available and almost ten percent not possessing a drivers' licence. Some bus users often travelled alone and used the travel experience itself as an important part of social inclusion, rather than as a means of gaining access to a service or place. Conversations frequently occurred between bus passengers and between passengers and drivers, many of whom were well known to each other. The two-hour route bus ticket was found to encourage quick trips, which discouraged social inclusion in some cases.

Many young people were found to have considerable difficulties associated with transport, particularly in relation to access to educational programs, work and entertainment. Rural youth living on farms, where the family had a low income, faced the greatest transport disadvantage. They were unable to access public transport and this meant that some were unable to seek holiday work and had few opportunities for recreational pursuits over the school holidays. Youth services

officers expressed considerable concern about the wellbeing of this rurally isolated group, which has a relatively high suicide rate. This strongly suggests the existence of a link between social exclusion and wellbeing for those involved, with the consequences of exclusion being very substantial in terms of life opportunities for some.

The local university campus is located outside the urban area, about five kilometres from the town centre. Local activities are primarily based in the town. University residential students without a car tended to face difficulties getting involved in recreational and other pursuits, such as part-time employment. Car ride sharing was common but was seen by some as an imposition. Female international students faced particular problems, being least likely to ask others for lifts. With the university's growth strategy being partly based on attracting overseas students, this access issue is of concern, both to the individuals involved and to the university. A possible consequence of failing to deliver improved access opportunities is loss of overseas students, because of the limited opportunities for social inclusion.

The role of access/mobility in promoting social inclusion, particularly social networks, could be clearly seen in seniors in Warrnambool. Car use is high in the seniors group and those with car availability typically have good accessibility. However, the strong car culture among many seniors is associated with neglect of planning for personal mobility requirements in later years, when car use is less of an option or simply not possible. This resulted in a sudden diminution of mobility for many and expressions of loneliness amongst this group, when driving ceased. They appeared to be unable to easily transfer to other forms of transport. This trend was found even for some people who were resident in an aged village, which owned a community transport vehicle.

Many Warrnambool people with a disability had not been part of the car culture and had organised their mobility requirements around using alternatives. These alternatives, for those who were urban-based, included public transport, community transport, walking (in many cases more than any other group), lifts in 'friends/families' vehicles and taxis. As a consequence, people with a disability who lived in an urban setting appeared to have good levels of accessibility, often supported by locational choices that tended to minimise the need for travel. They were able to draw on their good levels of social capital and as a consequence were commonly well included. While not explored in detail, there were suggestions that people with a disability who lived in rural settings found accessibility to services much more difficult.

Those on low incomes frequently found mobility difficult. Family groups often undertook car sharing, with one person (usually the mother) taking a very heavy load of driving other people to school, employment, health appointments. Those in geographically isolated areas, together with young single mothers, were at high risk of social exclusion. A combination of scarce child care opportunities and low frequency public transport, together with the costs of both, restricted the opportunities for income and socially inclusive activities.

The regional Indigenous community has its own buses that are well utilised. The need for vehicles is indicative of transport disadvantage faced by many in this community, who feel uncomfortable using route buses, due to the perception of racism from other passengers. Such racism tends to reinforce social exclusion and diminishes the cohesion of the Warrnambool community.

The importance of public transport, beyond a simple accessibility function to groups of people at risk of social exclusion was continually emphasised, in terms of the building of connectedness,

networks and social capital. Other factors, such as community strengthening, were not assessed in this case-study.

Thus, working from a broad 'needs based' approach to social exclusion in the Warrnambool case-study enabled a greater understanding of the interface between transport, social exclusion and the consequences of such exclusion. Accessibility to recreation, services and employment, was difficult for some people. Multiple disadvantage, or multiple sources of risk of exclusion, compounded both accessibility difficulties and associated social network opportunities and thus potentially had a major adverse impact on a person's wellbeing and happiness. The study has emphasised the order of magnitude difference that may exist between improving accessibility for those who are already socially included and those who are socially excluded. There is simply no comparison between a transport initiative that saves a few minutes travelling time for someone who already has a well developed social network and wide life opportunities and an initiative that opens up networks of opportunity for someone who is socially excluded. The same finding has emerged from two similar studies undertaken by the authors in an outer Melbourne suburb.

A consequence of this finding, for transport policy and planning, is that the benefits in terms of individual and community wellbeing from enhancing access/mobility of socially excluded groups are likely to be substantially greater than those arising from initiatives that create prima facie similar transport gains for those who are already socially included. An urgent research need, therefore, becomes the detailed analysis and, if possible, quantification of the benefits in question to those who are socially excluded. This benefit scale argument is implicitly accepted by those who fund community transport programs for some particular transport disadvantaged groups, such as those with a disability or seniors, where the cost per passenger trip may be several times the cost per trip of conventional public transport (Trimble 2005).

In the absence of detailed understanding and measurement of the wellbeing benefits from improved access/mobility to socially excluded groups, transport policy should ensure that travel opportunities are available to such groups for the times at which most activities take place. Transport service planners should accept lower utilisation rates on such services in the knowledge that the value of the travel in question is likely to be substantially higher than for a similar volume of travel by socially included people.

COMMUNITY TRANSPORT AND SOCIAL EXCLUSION

As well as people with certain characteristics being at risk of social exclusion, socially excluded groups of people are frequently clustered in specific locations: place-based social exclusion. These are typically areas with cheaper housing, which often have poor infrastructure and low employment opportunities. Thus, many residents of disadvantaged areas may experience difficulty in participating fully in activities which are essential for their wellbeing. Transport initiatives are likely to be particularly relevant in such place-based cases of exclusion.

A focus on accessibility and social exclusion quickly draws attention to the tensions between functionally arranged government services and the place-based locations for most of their delivery. This issue was highlighted in the Warrnambool case study, both within the transport sector and between transport and other sectors. This section focuses on problems of a lack of co-ordination between various parts of the transport sector, suggesting that this lack of co-ordination may be

a long term threat to service availability to socially excluded groups. Endnote 2 provides an illustration of the lack of co-ordination between transport and other sectors, in this case education.[2]

Community transport (or paratransit in the US) describes a largely ad hoc set of transport services usually provided for specific groups of people with particular needs or accessibility difficulties. This may include buses attached to elderly citizen residential centres, Day Centres and Local Councils for use of particular community service groups. The size of this transport system in Australia is now quite large and growing and has been identified for a considerable boost in funding in the recent Victorian social policy statement (Victorian Government 2005). The Warrnambool study identified that a community transport service was attached to a wide range of services, including schools, the Warrnambool Council (local government), Red Cross, a Retirement Centre, a centre for people with a disability, the Indigenous health service and health services in small local towns.

Provision of community transport is usually a result of an initiative by a non-transport sector, which recognises that transport is a basic requirement to enjoy the services provided by that sector. It can be seen as a response to policy failure on the part of the transport sector in meeting the transport needs of some groups of people who are at risk of social exclusion.

Community transport in Victoria (and in many other places) meets the accessibility needs of some people, for some of the time. However, as noted by Carlisle (2003), it faces difficulties: For example:

1. Restricted hours of operation: most services do not operate in the evenings or at weekends, although private hire of vehicles is sometimes allowed at such times.
2. In some services, medical appointments take priority over social contact.
3. Poor utilisation rates for some vehicles and transport services: for example, a sample of vehicles operated within the community transport sector in the broader Warrnambool region showed an average usage rate of 16,100 kilometres/year, with over 40 per cent doing fewer than 10,000 kilometres/year. Difficulties in obtaining volunteer drivers is one reason for poor resource use. By way of comparison, the average usage rate of a school bus in the area is almost 26,000 kilometres/year and there is scope to increase this utilisation rate.
4. Investing in vehicles rather than transport: Carlisle argues that many clubs and activity centres have invested in vehicles and are then left to deal with all the operational issues (e.g. accreditation, insurance, driver training, etc). This money could be better invested in organising suitable transport to the locations needed by looking at the range of vehicles already available in the area.
5. Poor information provision: information on transport options is usually lacking, restricting use of available options. Few community transport providers promote their services.

The biggest concern is that community transport entails a very narrow approach to dealing with social exclusion. It is typically quite 'exclusive', as eligibility and other requirements need to be met to obtain the service, such as within specified hours and sometimes only for particular purposes (such as medical appointments). While the service intent may be to increase social inclusion, the irony is that restrictive eligibility conditions can tend to have the opposite effect, restricting engagement opportunities to within the group.

The pattern of promoting exclusivity by providing specific transport services for people with a specific disability is going against the trend in many other sectors, which are seeking to integrate people more into mainstream society. For example, large institutions (children's homes and institutions for people with intellectual disability), were closed down in the 1980s and early 1990s in Victoria. Children with a disability are being integrated into the school system through a system of teacher aides and disability legislation requires buildings to be provided with wheelchair access. Social networking, the development of social capital and community capacity building are diminished where diversity is segmented.

The organisation of community transport is beginning to change in Australia and elsewhere, with various forms of service coordination and cooperation taking place within the sector. This is largely driven by the recognition of inefficient resource use and by the associated realisation that co-ordination between agencies providing services, or even integration, offers the possibility of either cutting costs, improving service levels or both. Burkhardt et al. (2003) show that such changes can deliver significant benefits in all these areas. However, there is a risk that the boundary of social inclusion is simply moving outwards with such initiatives, encompassing more people with similar characteristics and continuing to exclude others.

Some community transport systems are moving towards an incorporated organisation that has community transport as its core business. This is likely to further harden the boundary between community transport and regular public transport systems and may institutionalise duplicate systems. This could threaten the viability of both systems. By removing passengers or inhibiting patronage growth on regular public transport, it undermines the viability of those services, and vice-versa. The study in Warrnambool, for example, found that consideration was being given to new residential developments on the edge of Warrnambool being serviced by a community bus, rather than extending the existing route bus service. This would be a risk to the future viability of the route bus service, where over 80 per cent of passengers are concession travellers, (prima facie evidence they face a risk of social exclusion). Such developments could be said to reinforce social exclusion, by reducing the network options available for socially excluded people.

Risks to route services, and their customers, from the growing demand for, and high costs of, demand responsive paratransit services in the US has been noted by Trimble (2005). Her analysis found that these services catered for three per cent of trips provided by Washington State Transit Agencies but required 14.5 per cent of the budgets. She notes the following:

> Nationwide, ADA (Americans with Disabilities Act) paratransit budgets are increasingly eating into total transit budgets – which constrains funding for cheaper and more efficient fixed route services… To manage demand on paratransit services, a popular and reasonable approach has been to encourage and train paratransit riders to utilise fixed route services, when appropriate (Trimble 2005, p. 2).

This brief overview of developments in the community transport sector suggests that service duplication between community transport and regular public transport is a glaring example of tactical level (or service delivery) failure in dealing with accessibility aspects of social exclusion. Even though the community transport sector's origins are primarily founded in providing mobility/

accessibility for transport disadvantaged, socially excluded groups and individuals, the duplication in services that such services sometimes creates needs to be seen as a potential threat to social inclusion in two ways: by restrictive approaches to who can use a service and by increasing demands for scarce funds for public transport service provision in the broadest sense.

A more co-ordinated approach to community transport and regular public transport service provision is essential, within the context of place-based policy, if the opportunities for those clients needing transport services are to be maximised. Regular public transport services need to become more flexible, to cater for the specific mobility issues facing many socially excluded people. Community transport needs to focus its resources more directly on those with the greatest mobility difficulties, who are least able to switch to regular public transport. Incentives should be available to encourage such a switch. The outcome will be more efficient, comprehensive and effective services to socially excluded groups and individuals.

An improved tactical level approach to planning and delivering transport services for socially excluded groups should involve those groups, or representatives thereof, in needs identification and in developing possible solutions to those needs. This is an integral part of understanding the relevant needs and in capacity building, which forms an important element in social inclusion and thus wellbeing. This is in line with the governance goal outlined in the Context section of this paper.

SOCIAL GOVERNANCE AND SOCIAL EXCLUSION

Social governance (and related subjects such as community engagement/participation, associational governance) is a rapidly emerging field in social policy, with few established theoretical models to guide practice. The concept is commonly understood within a place-based context. Processes which involve citizens and the community are increasingly being talked about and experimented with, under such banners as 'capacity building', 'citizen participation' and 'community strengthening'. The method, and extent, of community participation varies greatly between programs, from consultation to far more active engagement. Fine et al. (2000), in their review of a number of social governance case studies, found that more effective outcomes were typically achieved in those projects that included active community involvement.

As with social exclusion, the concept of social governance (inclusive processes), as it might apply to transport, has been little explored and neither has the linkage(s) between such processes and the outcome goal of social inclusion. Ironically, the UK Local Transport Plans, which are intended to target social exclusion, appear to ignore engagement processes in their derivation. These plans are more about accessibility planning than about inclusion in the broader sense, a matter said to be addressed in the 2005 plans.

The authors used various engagement techniques, targeting socially excluded groups and others, in the identification of transport needs in the Warrnambool case study and proposed ongoing processes for engagement at the Tactical level. In particular, that study recommended the establishment of a multi-stakeholder Warrnambool Regional Accessibility Council. The main roles of the Council would be to identify transport/accessibility needs and to facilitate partnerships towards meeting these needs, with associated changes in State responsibility and funding channels that support the new approach. The Council was proposed to include representatives of govern-

ment, public transport and taxi operators, community sector organisations and members of the community, with local government playing a driving facilitative role.

Such co-ordinated demand and supply side initiatives should help to improve the effectiveness of the way needs are identified and the efficiency with which existing transport resources are used. The Victorian Government has subsequently established the proposed Regional Accessibility Planning Council as a demonstration model.

POLICY CHALLENGES IN USING THE SOCIAL GOVERNANCE MODEL

The introduction of governance process principles, with a particular objective of reducing social exclusion, provides many challenges, in what is still a little understood form of public management. Many of these challenges will be faced in the transport sector as it moves towards various forms of governance models, some of which are identified by the US Transportation Research Board (TRB 2004), as illustrated below. The particular focus in these examples is achieving increased social inclusion.

COALITION-BUILDING

If social exclusion is a policy objective, then governance processes should seek to include representatives of excluded groups, such as peak non-government agencies and regional/local service delivery agencies and their constituencies, in needs identification and program development and implementation processes (the level of involvement depending on the issues being targeted). Coalition building around transportation issues has been shown to be an effective means of improving transportation services delivery to transport disadvantaged groups. Typical coalition partners include transport agencies, human service agencies, local government, non-government organisations etc. TRB (2004, p. 2) suggests that, in this context, a broad-base coalition has the best chance of success.

Experience suggests that, the more local the engagement being sought, the more difficult it is to achieve engagement of a cross-section of interests, because the process is time consuming, resource intensive and demanding of participants, who may initially see little direct pay-off. A long term perspective is needed, with governmental partners committed to a workable coalition.

LEADERSHIP

The US (TRB 2004) report identifies the critical importance of strong leadership, both at local and state levels. Successful outcomes frequently depend on a champion who has vision, dedication, perseverance and is willing to work hard. The importance of engagement, leadership and personal drive was identified as important to program success in an evaluation undertaken by one of the authors in relation to the integration of children's services (Hydon et al. 2005). UK research raises a concern about how leadership may be generated within a community when community involvement is introduced, often not due to a concern of the community, but rather as a result of work is initiated or 'manufactured' by the government (Hodgson 2004).

SUSTAINABILITY

Sustaining a coalition over the long term was found to be a challenge in the TRB report, a finding that mirrors one of the findings of Hydon et al. (2005) in relation to children's services. An im-

portant issue in relation to sustainability in the latter study related to the problem of cost-shifting from government to community. While most not-for-profit groups operate with considerable goodwill, the expectation of voluntary input from the not-for-profit groups and the community, while other partnership members are paid (such as government representatives) is a source of tension. Time pressures associated with an additional 'voluntary' work load may slow progress in the program, while the inequity could create an unwillingness to remain involved.

BUILDING TRUST

Trust between partners and concerns about control over client services and funds, was viewed as a major challenge in the 22 case-studies reviewed in the TRB report, an issue strongly reflected in other studies. Issues of trust, accountability and the willingness to devolve power and decision-making are of prime importance to successful engagement (Stanley et al. 2005; Hydon et al. (2005). Various mechanisms to encourage trust are also discussed in the Stanley et al. (2005).

At times government, while (in theory) involving civil society, in practice finds it difficult to relinquish authority, often 'seeking to control from a distance' (Hodgson 2004). Such behaviour will discourage trust. These problems can be compounded by a governmental failure to integrate policy and operations between head and regional departmental offices. This shows a lack of leadership and undermines both coalition building and trust.

The kind of behaviours likely to encourage trust in a governance process that is targeted at reducing social exclusion are: involving stakeholders from the start; investing effort in developing relationships with these stakeholders; maintaining on-going and open communications; and, ensuring effective participation.

EFFECTIVE PARTICIPATION

For the goal of social inclusion to be achieved, it is of great importance to ensure that community participation is more than tokenism. Once a community opinion has been obtained about policy/program matters, there needs to be integration between the strategic (broad policy goals), tactical (system design) and operational (service delivery) levels, to make this input effective through to policy and program development, implementation and monitoring.

The failure in such integration can be seen in the Victorian Government's Neighbourhood Renewal Program and the smaller Breaking Cycles, Building Futures project, which finished at the end of 2004. Both these programs have central goals around community engagement and participation, yet lacked structures to capture community opinions beyond the operational level. A similar fault can be seen in the Victorian government's Transport Connections program which, in essence, places project workers in local communities to facilitate local transport. While this program may produce some valuable local initiatives, the failure to integrate the program with the tactical and strategic levels, is likely to result in small, localised and unsustainable initiatives. There is a real risk that such a scheme will frustrate the community, rather than encouraging social inclusion.

It is difficult to measure the extent to which the outcomes sought from integration are achieved and whether they are a result of the integration or other factors (Fine et al. 2000). The literature commonly reports that judgement is still open about the 'success' of the integrated governance model in general (eg. Geddes 2003). Notwithstanding such concerns, given the value commitment to pursue a social inclusion goal and the expectation that engagement is an important element

in this process, it is important that all avenues to achieve a successful process are taken, in line with these values.

FUNCTION VERSUS PLACE

Governmental service delivery organisation is still primarily functionally based, with policy making logic still largely based around markets and prices and the dominant public sector paradigm, which features contracting and risk management (Wiseman 2005). The influence of integrated governance is small and largely experimental in nature. The interface between this model and the place-based, integrated governance model with participatory decision-making with the community is, as yet, difficult and awkward. These tensions can undermine governmental commitment to place-based delivery and engagement of socially excluded groups.

CONCLUSION

There are strong inter-connections between the four policy goals outlined at the beginning of this paper. This chapter has argued that the individual benefits of reduced social exclusion to the people involved are likely to be many times greater in ultimate value than those derived from transport initiatives that focus on people who are already included. This conclusion should drive a search for clearer identification of the benefits of reduced exclusion, to place social inclusion more equally alongside more readily measurable economic and environmental policy outcomes. It should also drive a search for improved methods of achieving engagement of socially excluded groups and individuals, to maximise the potential effectiveness of program outcomes directed to such groups and in recognition of the democratic rights that underpin such engagement.

ENDNOTES

1 Personal communication from Michael Roschlau, CEO and President of the Canadian Urban Transit Association.

2 The Victorian government introduced a new secondary school education pathway which, post-school, led to an apprenticeship and trade education. The program involved attendance at secondary school, Trade College and at a work place. However, the scheme in rural areas around Warrnambool was said to lose 50% of the children who commenced, largely because the program failed to consider, and make provision for, how the children were going to travel between these education sites.

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PUBLIC TRANSPORT AND SOCIAL EXCLUSION: AN OPERATOR'S PERSPECTIVE

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The role that public transport provision can play in reducing social exclusion is a growing focus of public policy in Australia and elsewhere. This chapter reports work by Bus Association Victoria to explore this issue in a regional Victorian community. It shows the importance of establishing a reasonable base public transport service level, to provide transport disadvantaged groups with travel choices. It also emphasises the importance of co-ordination between various government agencies providing or supporting regional personal transport services, to ensure the efficiency and effectiveness of services. A range of proposals was put forward to help resolve these concerns, particularly focusing on improved regional accessibility planning and service delivery.

CONTEXT

The Australian Bus Industry Confederation's (BIC) *National Policy Statement 2001: Building a Public Transport Culture* (2001), spells out the industry's five key goals for improved sustainability of Australia's land transport passenger task. One of these five goals relates to equity in service provision. The Equity Goal reflects both (1) BIC's view that public transport should be available to provide mobility options for all, and especially for those without access to a private car, and (2) an acceptance by BIC that this is an integral part of providing more sustainable land transport systems.[1]

This value perspective on the need for basic levels of mobility does not take one far, however, in terms of defining more clearly just what levels of mobility are required in particular circumstances. Should there be some basic minimum irrespective of location or should remote regional areas be treated differently to regional cities and to the outer urban fringes? Do all people, especially those groups who have difficulty participating fully in society due to age, disability, low income etc. (i.e. those more likely to be experiencing social exclusion) have equal access to transport? What measures can be put in place to achieve the equity goal, outlined above? Is there a way that organisations with an interest in these issues of transport accessibility and the problems of social exclusion can work together to improve people's wellbeing and quality of life?

It was questions such as these that prompted Bus Association Victoria (BAV) to begin exploring the concepts of transport disadvantage, social exclusion and wellbeing and to consider the roles that public transport in general, and buses in particular, might play in reducing exclusion and improving wellbeing. Early in the research process, it was seen as important to undertake a case study to shed light on how these concepts might actually play out in reality.

Warrnambool was selected for the case study. The major aim of the Warrnambool study was a relatively modest first step along the path of understanding linkages between public transport services, transport disadvantage, social exclusion and wellbeing. The study aimed to explore travel patterns of groups that typically include many transport disadvantaged people and to

identify the priorities they saw for transport improvements that will reduce their disadvantage. Transport disadvantaged groups typically comprise young people, seniors, persons with a disability, people on low incomes, rurally isolated and Indigenous people, groups that are likely to include many people who are susceptible to social exclusion because of transport shortcomings.

WARRNAMBOOL AND ITS CURRENT TRANSPORT SERVICES

Warrnambool is located on the coast about 260 kilometres south-west of Melbourne, in the Victorian (Australia) rural Western District. The Warrnambool regional economic and social catchment is home to about 35,000 people, who live in one of the fastest growing areas within Victoria. This growth is adding to needs for improved public transport services.

The area has a higher population concentration in the older and younger age groups than the rest of the State. Both these age groups tend to be relatively dependent on public transport for access, accounting for four out of every five tickets sold on the Warrnambool route bus service. Numbers in both age categories are growing. At the same time, the population is ageing, with an associated increase in the requirement for public and/or community transport services.

Warrnambool currently has three major local/regional public transport systems:

1. route bus services: with about 7.8 service kilometers per capita provided. Figure 1 shows how this compares to route public transport service levels in a range of other locations. It shows that Warrnambool has less service availability than the Dandenong area in outer urban Melbourne and considerably less than the Melbourne area as a whole. It has less than half the service level of Geelong. Route bus services in Warrnambool do not cater for normal journey to work times, because of the heavy service focus on school travel. This limits travel options for some people;
2. school bus services: half a million service kilometers per year are provided (about twice the number of route bus service kms), with about 500,000 student boardings annually. These services are complemented by shuttle services and urban school services that carry an additional half million journeys per year. In total, carriage of school children accounts for five out of every six route plus school service journeys per year;
3. regional bus services (V/Line): 50,000 passengers per year and 450,000 service kms.

There is also a rail service to Melbourne.

In addition to these public passenger transport services, a number of community transport services have grown up, usually centred around various community health, aged or disability services and/or using Council-provided vehicles. These services are meeting vital mobility needs for some groups but many of the transport services are facing operating problems. Service availability is restrictive and efficiency of vehicle use tends to be low.

Taxis play a minor but important complementary transport role.

Some of the towns outside Warrnambool have minimal, or no, local route public transport services available. For example, Portland, with a population of about 11,000, has about 1.2 service/kms per capita, while Port Fairy (2540 population and a large summer influx) has no service. Some of the towns outside Warrnambool also have poor, or no, connecting services to Warrnambool, which functions as the regional centre.[2]

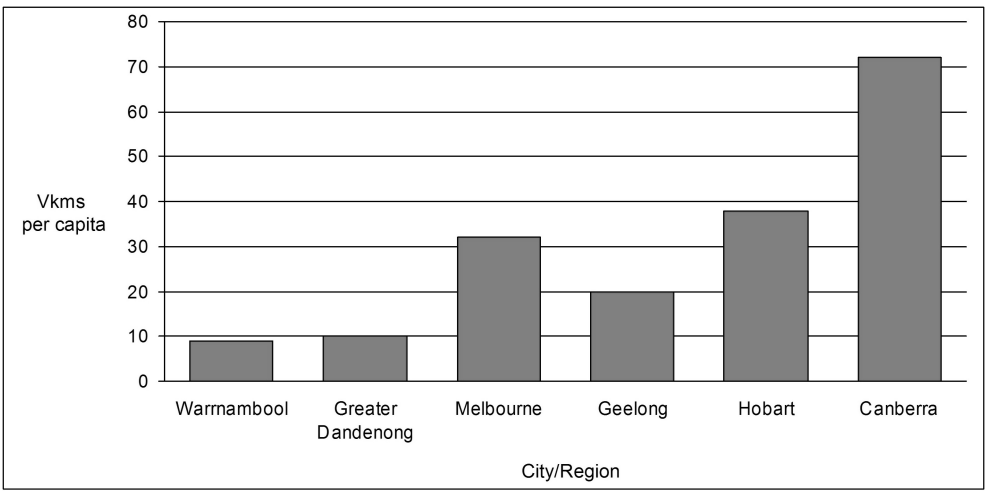

Figure 1 Public transport service kilometers per capita

TRANSPORT DISADVANTAGED GROUPS IN WARRNAMBOOL AND THEIR TRAVEL NEEDS

The study focused mainly on travel needs of transport disadvantaged groups but also gathered some comparative information on those without such disadvantage.

A shopping survey, where car use clearly dominated travel mode choice, together with a small household survey, clearly showed the strong attachment to the car in the region and the high level of mobility it provides. Car use frequently involves accompanied travel, indicating a potentially important social benefit from such travel.

The study showed a high level of captive users on bus services, some 2/3 of those interviewed having no car available and about ten per cent not possessing a drivers' licence. Bus service limitations (e.g. few weekend services; late weekday starts and early finishes) can restrict opportunities for engaging in activities such as after-school work by students. The study showed that the bus travel experience itself can assist social inclusion (e.g. a senior woman was interviewed who undertook a circular bus trip for the purpose of getting out and encountering others). Bus travel can also provide a means of inclusion for groups of travelers. For example, three generations of one family were interviewed traveling on consecutive days, to share each other's company.

The study showed that public transport ticketing arrangements can hinder inclusion. In particular, the two-hour route bus ticket tends to encourage quick trips and discourage people staying in town for social inclusion. It can cause financial difficulties for those on low incomes if a second ticket is needed to accomplish certain activities.

Young people can be both independent and dependent in terms of travel needs. Independence comes from being able to walk or cycle for many trips, with weekends being notable. Dependence comes from reliance on parents/others for car travel, especially during the week and particularly for those living outside urban Warrnambool. Some young people are doubly disadvantaged by living in non-urban locations and in low income households who are unable to pay for alternative transport (e.g. a second household car or taxi fare). Particular problems were found in relation

to youth access to alternative educational programs, work and entertainment. Examples were identified of young people advised not to seek employment until they had a car. Poor public transport service availability was thought to encourage some young people to leave town and/or drive sooner than otherwise, with safety consequences. Rural youth were thought by BAV researchers to be facing the greatest transport disadvantage of the various groups studied in the area.

The Deakin University Warrnambool campus is located just outside the Warrnambool built-up urban area. Residential students living on-campus were included in the study, because there had been some press reporting of accessibility concerns. The University is aiming to grow its international student numbers and dealing with access issues may be one means of enhancing opportunities in this area. Residential students without a car tend to face transport difficulties, particularly outside route bus service times. Reliance on others for travel is common and is seen by many, both those seeking and those providing service, as a source of concern. Female international students face particular problems, being least likely to ask others for lifts.

Seniors are a significant and growing part of the regional population. Car use is high and those with car availability tend to have good accessibility. Walking is popular among many seniors, particularly those living close to the centre of Warrnambool, where many of the activities in which they often engage are located. The strong car culture among many seniors is associated with neglect of planning for personal mobility requirements in later years, when car use is less of an option or simply not possible. Road safety issues may arise from this lack of planning. Knowledge of public transport services among car-reliant seniors was typically poor. The two-hour public transport ticket was a particular concern to those seniors who used the bus service, because it limited time available for multiple activities, unless they purchased a second ticket (with associated cost consequences).

Those seniors without car access are typically at greater risk of social exclusion. Community transport services target some of these groups but tend to focus more on those with a disability. Availability more generally is often restricted in terms of groups who are eligible to use particular services.

Many people with a disability have not been part of the car culture and have organised their mobility requirements around using alternatives. These alternatives include public transport, community transport, walking, 'friends/families' vehicles and taxis. In such cases, social exclusion does not appear to be a major issue. Where the range of choices is narrow, however, accessibility is more problematic. For example, one vision impaired person indicated that lack of public transport service options was likely to cause her to move back to Melbourne (having recently arrived in Warrnambool). She indicated that if the study's proposals were adopted she felt she would be able to stay. Those with a disability living outside urban Warrnambool face particular problems.

Warrnambool residents living on low incomes often adopt car-sharing as a means of achieving accessibility. They are typically more reliant on public transport than those on higher incomes. Those in geographically disadvantaged areas, and particularly young single mothers, were found to be a group at high risk of social exclusion.

The region includes several major employers. These are not major markets for public transport use at present, because of factors like the timing of services and the car culture in Warrnambool. They remain an opportunity for service development.

The regional Indigenous community has its own buses that are well utilised. The need for such vehicles is indicative of transport disadvantage faced by many in this community, who feel uncomfortable using route buses (perceived racism). Many in the Indigenous community experience multiple sources of transport disadvantage.

Figure 2 shows the number of return trips per capita undertaken by people in the various groups who were surveyed by BAV researchers. Sample sizes are small in some cases but, based on wider regional consultations undertaken with groups representing the interests of transport disadvantaged groups, the general pattern is thought to be indicative of behaviour.

The numbers of average daily return trips undertaken by various groups of respondents differed, in some cases substantially. Seniors with cars took an average of 1.6 return trips per person per day in the region. This was over twice the trip rate achieved by those aged living in hostel accommodation, who tended to be older than the car-users. Secondary students undertook an average of 1.65 return trips per day but with those living in regional areas making about one-quarter fewer trips (including their trip to/from school). Deakin students staying in on-campus residential accommodation averaged 1.14 regional return trips per day, usually to Warrnambool and return. Respondents with a disability averaged 0.8 return trips per person per day, although they seemed to undertake more activities per trip than most survey respondents (about 1.35 activities per trip). In any particular group, those without a car available tended to travel less. However, those with a disability showed how resourceful organisation can ensure a wide range of activities can be undertaken, without a car.

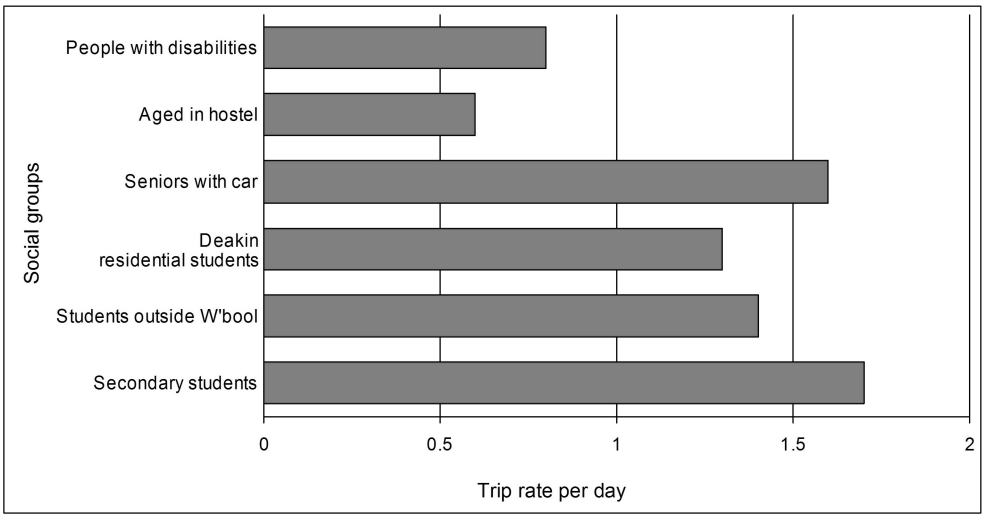

Figure 2 Trip Rates from the Warrnambool Case Study

MAIN PROPOSALS

The BAV Warrnambool study suggests four main areas for improvements, to better meet the travel needs of transport disadvantaged groups in the region (i.e. to reduce their transport disadvantage and improve the prospects for social inclusion):

1. increased public transport service frequency, span and coverage;
2. better marketing of public transport services;
3. regulatory reform, to increase the flexibility with which services can be made available; and,
4. improved arrangements for planning of transport systems within the region and State.

The first two sets of proposals relate specifically to Warrnambool, though the proposals have more general applicability. The last two are proposals for State-wide systemic change.

SERVICE ENHANCEMENTS

The main short term justification for local/regional bus service improvements is social equity: ensuring that people in the community have a travel choice at most times they need to travel. The study proposals would bring Warrnambool service levels closer to those that are available in outer suburban Melbourne. Longer term, environmental sustainability and road safety arguments also support a greater role for regional public transport.

The study indicated that there are significant shortcomings in the current operating times of the Warrnambool route bus service and some gaps in services elsewhere in the region, both in terms of town services and inter-town services. These shortcomings particularly disadvantage groups/individuals that are relatively more susceptible to social exclusion from transport causes. To deal with these problems, the study proposed establishment of a minimum hourly service level in Warrnambool from 7.00am to 7.00pm on weekdays, 8.00am to 6.00pm on Saturdays and 9.00am to 6.00pm on Sundays, with a less frequent late night (Night Rider) service on Friday and Saturday nights.

These minimum service level initiatives would benefit large numbers in each transport disadvantaged group in urban Warrnambool. The idea of a minimum service level for public transport is in accord with the 'capabilities' approach to personal wellbeing, as argued in chapters 2 and 13.

Other proposed service initiatives included:

- services targeted specifically at major employers (where changes in shift times would assist viability of public transport services)
- services to new Warrnambool growth suburbs
- a trial route/tourist service in Port Fairy, using a school bus
- twice weekly day-time services plus Saturday night services from Mortlake and Hawkesdale to Warrnambool, using school buses, filling gaps in the current inter-own network.

MARKETING

The study revealed that there was little marketing of bus services to transport disadvantaged groups in Warrnambool. This was seen as a particular problem with respect to seniors, as they approach non-driving age. Service enhancements must be accompanied by improved marketing programs, to maximise prospects of use. To encourage bus operators to more actively market services, future route bus contracts should include marketing support and incentives.

The two-hour route bus ticket was seen as inhibiting social inclusion, because of the constraints it imposes on journey and activity patterns. Many people found it hard to undertake multiple activities within the two-hour time slot, which meant buying another ticket or shortening activity times. An extension to a three hour ticket would seem likely to promote social inclusion by some at-risk people.

Racism on public transport was a perceived issue among the Indigenous community in Warrnambool. Programs to deal with this situation should be implemented, to assist inclusion.

Low income households found financial difficulties in paying for a student travel pass. Introducing a time-payment option for this pass would assist cash flow requirements for these people.

REGULATORY REFORM

The study found that there were a number of regulatory constraints inhibiting improved use of transport resources in the region. Two examples illustrate this issue.

Greater flexibility in use of school bus services by non-students would open up accessibility/mobility opportunities for a number of transport disadvantaged people who would place a high value on this travel opportunity. This applies particularly to people in rural areas, where transport disadvantage is typically highest for any given 'at-risk' group. There needs to be guidelines available for bus operators as to how such opportunities can best be utilised, while meeting their primary transport obligations to their existing students.

The Disability Discrimination Act currently restricts use of school buses for providing route services in areas/times lacking other services, because the school buses do not meet DDA requirements. While provision of accessible vehicles should be a long term objective for route services, it seems misguided to not use available school bus capacity to provide route services in areas where they are currently lacking or substantially under-supplied.

ACCESSIBILITY PLANNING

Personal transport is essentially about meeting accessibility needs and fostering social inclusion. However, institutional arrangements for service delivery tend to occur along different lines (e.g. particular services and modes), such that no government entity is responsible for accessibility. In Warrnambool, and elsewhere in regional Victoria, for example, public transport services, school bus services and community transport services operate mainly in isolation, rather than being seen as part of a single service delivery system. Overcoming this fragmented approach to accessibility needs identification and service planning is perhaps the single most important requirement if social exclusion is to be seriously tackled in regional communities. For that reason, this chapter elaborates on this theme in some detail.

As the UK's Social Exclusion Unit (2003, p. 3) has noted:

> Historically, nobody has been responsible for ensuring that people can get to key services and employment sites. As a result, services have been developed with insufficient attention to accessibility…

The SEU's answer is to implement an 'accessibility planning' approach, based on the idea of giving someone ownership of accessibility problems. That someone in the UK environment is

local government and the SEU approach, adopted by the Blair Government, has been to build a requirement for accessibility planning into Local Transport Plans. The requirement for these Local Transport Plans is built into national legislation in the UK. By this approach, clear responsibility is assigned for dealing with issues raised by transport disadvantage/social exclusion.

BAV's research suggests that local government should be playing a major role in influencing transport service provision. However, there is no unanimity in local government about just what the most appropriate role should actually be. BAV believes that the local government role should be a co-ordinating role in local/regional accessibility planning but that it should not have a direct role in service provision. Higher level (system-wide) co-ordination, within which local/regional accessibility planning takes place, should be undertaken at State level, because of the funding connection and need for a State-wide perspective on needs and priorities. How might this operate?

BAV believes that Regional Accessibility Planning Councils (RAPCs) should be established, based around transport/activity catchment areas. The trip distance data gathered in the Warrnambool study, for example, suggests Warrnambool has an activity catchment that is mainly confined within a distance band of about 50 kilometres. The local council responsible for the major activity node (e.g. Warrnambool City) should be responsible for forming a Regional Accessibility Planning Council, comprised of representatives of the community transport sector, public transport operators, taxi operators, advocates for transport disadvantaged groups, the Department of Infrastructure, Department of Human Services, the Victorian Department of Communities, local councils and the broader local community. The work of the RAPC should be supported by regional local government, which is already devoting some funding and staff time to such matters, and provided with some financial and research assistance by the State Government, which already has responsibilities in the field.

Longer term, the inclusion of some key agencies involved in service provision in areas like employment, education, etc. would be worthwhile, recognising that accessibility is usually about such activities at least as much as about transport. In the short term, however, it is a large enough task to improve co-ordination with respect to transport service provision to improve accessibility.

The role of the RAPCs should be to:

- consult widely at the regional level about accessibility and its role in facilitating social inclusion and more sustainable personal transport systems;
- identify regional priorities for improving accessibility through transport initiatives;
- work with transport service providers to improve the effectiveness of current service provision from a personal accessibility perspective;
- advise the State Government on possible improvements to current modes of regional passenger transport service delivery; and,
- submit accessibility improvement programs for State and possible Federal funding support.

In short, these Councils should be given institutional ownership of accessibility needs identification and given the institutional frameworks and resources to work to effect change.

The proposed Regional Accessibility Planning Council focuses on the demand or needs side of accessibility planning. The corollary is the requirement for improved supply side co-ordination, which essentially requires a mechanism for ensuring that the most effective use is made of available transport resources (primarily vehicles and drivers) to meet identified needs. Regional communities

can gain from improving the utilisation of existing transport resources, as well as from increasing the level of resources where needs exist.

Improving the efficiency with which existing regional public/community transport resources are used is a task that requires specialist skills, skills that should reside with professional transport operators. Operators in the area to be covered by the RAPC should be invited by DOI to tender for performing the role of public/community transport resource co-ordinator. DOI and the RAPC should jointly decide the successful operator. That operator would focus on generating greater productivity from the available school bus fleet, community transport fleet and other transport resources (e.g. taxis), subject to agreement from the operators involved. This will allow community service groups to get on with their core business, rather than running transport operations.

It is not intended that the RAPC role will be able to unilaterally amend existing Government public transport contracts, which are a matter for the operators involved and the responsible State authority (mainly DOI). Instead, its primary purpose is to propose ways of better managing regional transport resources, to effectively improve regional accessibility.

For such proposals to have maximum impact, there needs to be a clear sense of regional ownership of the program and the proposals need to be part of a system of such arrangements State-wide, with a clear reporting path to State Government. With the current divided governmental responsibilities in relation to regional transport and accessibility services, it is hardly surprising that there is frustration at community level, inefficient use of resources and poor targeting of available resources to needs. Transport/access issues should be the responsibility of a single state agency and DOI is the logical agency in Victoria, given its core responsibilities. All State funding that is transport-related should be channeled via DOI and this is where bids from Regional Accessibility Planning Councils should be directed. If needed, a Cabinet Access Committee could be formed to allow other agencies with a strong interest in accessibility issues to be closely involved in assessing needs, policy directions and program funding.

Figure 3 summarises these ideas. It shows regional transport interest groups and the wider community, together with regional/local transport providers, forming the Regional Accessibility Planning Council, under the leadership of the major regional municipality. It shows the RAPC interacting regionally with transport interest groups, transport providers and the broader community in the needs assessment process. It shows a regional transport resource co-ordinator, whose task is to co-ordinate existing transport resources to deliver more efficient service outcomes, working to and with the RAPC. That co-ordinating operator will draw on the transport resources available regionally. The link between the co-ordinator and DOI reflects the proposal that the role of co-ordinator be decided by a tender process, with funding for costs involved being part of the State Budget Transport allocation managed through DOI and the successful tenderer being accountable for performance to DOI.

The figure also shows DOI as the State channel through which the RAPC process operates. This would replace the current silo model of service delivery, where route, school and community transport services are treated separately, not as one system for meeting access needs.

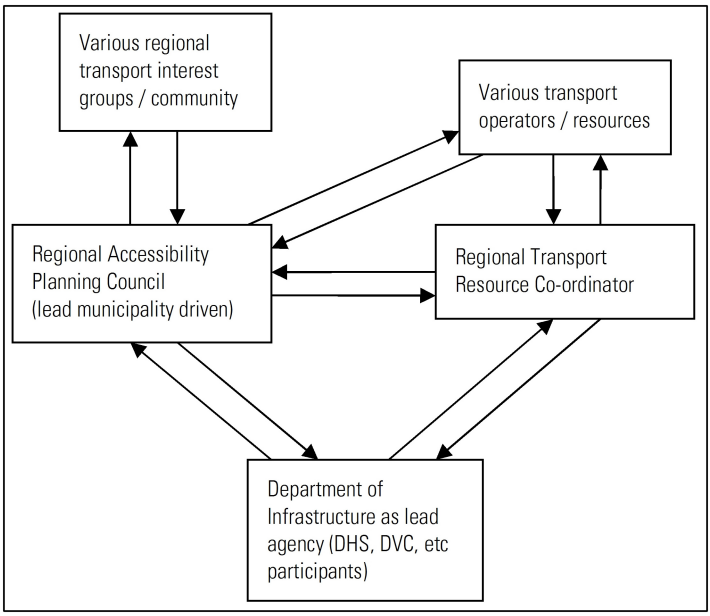

Figure 3 Proposed Regional Accessibility Planning/Delivery Model

CONCLUSION

Social exclusion is a growing concern for public policy makers in many countries. The role that public transport can play in reducing exclusion is a subject of growing attention. The Bus Association Victoria research in Warrnambool has shown that generic bus service improvements, to deliver a reasonable minimum service level, can benefit many groups who are often transport disadvantaged and at risk of social exclusion from this perspective. The research has also shown that the benefits of such service improvement may be substantially greater than is usually estimated, because of the potentially life changing impacts of reducing social exclusion. Valuation of such benefits is an important area for future research.

The Warrnambool research has complemented UK work in showing that a lack of institutional ownership of accessibility leads to inefficient use of resources and reduced effectiveness in program outcomes. This problem is compounded by the compartmentalisation of governmental program planning and delivery systems. A more integrated regionally-driven approach to accessibility needs identification and prioritisation, linked to a supporting higher governmental planning and funding structure, is the key to better outcomes.

ENDNOTES

1 This paper summarises, and adds to, some of the material in a longer report by Stanley and Stanley (2004).

2 Since the release of the BAV Warrnambool study report, the State Government has announced service enhancements that fill the major service gaps that were identified between outlying towns and Warrnambool, together with an upgrade of route bus services.

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LOCAL AND COMMUNITY TRANSPORT

A MOBILITY MANAGEMENT APPROACH

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This chapter outlines how a mobility management approach to local and community transport can address transport disadvantage by facilitating access to public and community transport services. The chapter examines mobility issues faced by transport disadvantaged groups and identifies a range of gaps that hinder achievement of end-to-end trip realisation. This highlights many of the barriers that need to be tackled to improve social inclusion from a mobility perspective. The chapter presents a case supporting strong local/regional input into mobility planning and service delivery.

THE ACCESSIBILITY GAP

The provision of 'transport' is not as important as the ability of people to have mobility so that they can access goods and services and play a part in community life. Transport, in this context, is a secondary good – a means to an end, not an end in itself. A key concept in the task of managing mobility is that of the 'accessibility gap' (Tyler 2002).

People fall into the accessibility gap when they do not enjoy mobility and thereby have difficulty in accessing the goods and services they need to participate fully in their community. Those in the accessibility gap generally do not have access to private transport, as either a driver or passenger, cannot use public transport and cannot access specialised transport services such as community transport.

Access to public transport can be limited for a number of reasons. Broadly speaking these reasons can be categorised as spatial, temporal, systemic or personal.

Specifically the barriers to travel may include:

- bus stops or railway stations being too far from where people live or where they need to get to;
- inaccessible infrastructure such as a lack of footpaths or shelters and stations with poor access;
- inaccessible vehicles (e.g. steps too high);
- a lack of relevant and accessible information about services;
- services being too costly;
- services not running at the times they are needed;
- a lack of appropriate assistance from transport staff;
- worries about security including personal safety and travelling on crowded services during peak hours;
- cultural barriers;
- the personal characteristics of the traveller; and
- poor service connections.

Some of these reasons relate to the transport system and others to the person's own situation or characteristics.

Access to specialist or community transport services can also be limited for some of the same reasons. Running times and cost may be two examples but there are also other reasons specific to the Community Transport sector. These include internal agency policies that restrict access (for example, an agency may only provide transport to medical appointments) and people falling outside the eligibility criteria for some services – most specialist services are funded by government and each funding program targets certain people in the population to the exclusion of others. Even where there is the ability for operators of specialist services to make use of spare capacity, there may be restrictions on who may take advantage of this concession.[1]

Another common reason why people cannot access special services, even when they are eligible to use them, is the services having insufficient capacity and having to turn potential passengers away. This may result in people being placed on a waiting list or having to book far in advance to obtain a service. Occasionally community transport services close their books altogether because of excess demand.

So, those who cannot access either public or specialist transport services and do not have access to private transport are likely to be in the accessibility gap.

What can be done about this? It is possible to mitigate the problem by making changes to the way transport services operate. If, for example, a bus company introduces low floor buses, this will enable some additional people to use their services and the accessibility gap will be reduced. As other measures such as better network design, better coordination of services, more accessible infrastructure etc. are implemented, the gap will close. Of course effective accessibility measures may also attract some passengers back from specialist services, which will in turn open those services up to people who have been languishing on waiting lists. The gap may also be addressed by specialist services increasing service capacity or relaxing eligibility criteria.

WHO IS IN THE ACCESSIBILITY GAP?

There are a number of population groups, many of the constituents of which are relatively likely to fall into the accessibility gap. These include:

- older people;
- people with disabilities;
- young people;
- women (particularly those with young children);
- people left at home without a car;
- unemployed people; and
- people who cannot afford a car.

These groups are not, of course, mutually exclusive, nor is the list exhaustive.

Older people may have ceased driving due to disability or ill health and some older people, particularly women, have never held a driving licence. As income drops with age, the ability to afford private transport also reduces. This has a number of effects, including a possible need for expensive in-home care, problems in going shopping for healthy fresh food (which may require travel beyond the local store), increased social isolation and, in some cases, when people continue

to drive when they are no longer able to do so safely, but do so out of necessity, the incidence of motor accidents rises.[2]

People with disabilities who drive value their access to private transport very highly, because they are generally unable to access alternatives such as public transport. Those who do not drive and cannot access public or community transport,[3] are likely to have a reduced ability to earn a living and contribute to society. There may also be additional stress on their carers.

For young people, a lack of access to private or public transport can mean becoming disengaged from education and training and having difficulty in retaining apprenticeships. A recent report on youth debt indicated that some young people have problems paying the transport costs associated with meeting their activity test obligations(Welfare Rights Centre 2002). If they are 'breached' for failing to meet these obligations they receive a double penalty – loss of benefit and loss of transport concession.

Women tend to have different travel patterns to men, a result of women and men having unequal access to economic resources, their use of different social resources and the fact that many women are time poor due to their having to combine employment with traditional roles of housekeeping and child rearing (Turner et al. 1998; Morris et al. 1996). Women of working age have been referred to as the 'sandwich generation' (Rosenbloom 1994), as they may have caring responsibilities for both children and elderly parents. Lower income often equates to a lack of private transport, a reduced ability to make use of taxi transport and a dependence on mass public transport such as buses and rail services. These transport modes are, however, by their very nature inflexible and do not tend to suit the multi-purpose trips that many women tend to make (e.g. drop the children at day care, pick up some shopping then on to work). Vehicles are often physically difficult to access by passengers with significant baggage, such as shopping or strollers or people with young children in tow.

Another group that is often found in the accessibility gap are people left at home without a car (the family car may have been taken to work by a family member or may spend all of each working day sitting at a railway station car park). People left at home without a car may have difficulty in taking home bulky grocery shopping, getting to the doctor, in becoming involved in social networks and run the risk of becoming socially isolated and prone to depressive illnesses. Parents with young families can be particularly disadvantaged, as they also face the difficulty of travelling on public transport with young children and the concomitant strollers and buggies.

The final example of people who are typically left in the accessibility gap are the unemployed. They can be caught in a vicious circle whereby they need a car to be able to get to far flung job interviews or jobs but cannot afford a car because they do not earn a wage. Their difficulty is exacerbated because the days of the CBD, with its access to good public transport, being the main employment centre are over, with most employment now being located in other areas, often away from fixed route rail and bus services.

WHY SOME PEOPLE MAY BE IN THE ACCESSIBILITY GAP

In 2004 Transport Planning and Management surveyed 4,000 clients of the Home Care Service in Northern Sydney.[4] Clients of the Home Care Service are either older people or people with functional disabilities. The survey sought to discover why members of this group did not use various forms of transport.

The main reasons for Home Care Service customers not using public buses included: not being able to get on the bus (44 per cent), footpaths or kerbs too uneven or steep (39 per cent), bus stop too far away (28 per cent) and needing assistance but none available (27 per cent).

Reasons for not using rail services were: stations not being accessible (30 per cent), cannot get to the railway station (25 per cent), no direct route to where they wanted to go (23 per cent) and needing assistance but none available (23 per cent).

The use of taxis was restrained by: expense (61 per cent), unreliability (25 per cent), not being willing to cater for short trips (23 per cent) and drivers being unwilling to provide assistance (21 per cent).

The use of Community Transport was mainly constrained by participants not being aware of the service (62 per cent).

During the development of a recent Community Transport Plan in outer Western Sydney, a wide range of community agencies were interviewed about transport needs in their local areas.

The interviewees said that people found the public transport system complex and difficult to understand. There was confusion about eligibility for Community Transport services and it was suggested that there is a need for the production of guides and the provision of more education about transport services and how they operate.

There was a call for more flexible transport services, more services to destinations out of the region and more transport at nights and at weekends. Participants said some community members had problems getting to bus stops, that there were few or no wheelchair accessible taxis in some areas and that there appeared to be a service gap between Public Transport and Community Transport services.

There was a call for more understanding and cooperation between transport sectors and services and the suggestion that there is a need for a central body to coordinate transport.

In summary, agency staff had a common view that the local transport system was a mish-mash of different operators, services and information sources, with little coordination and no sense of an overall system at all.

Although not explicitly expressed during the consultations, the concept of the need for an 'accessible transport chain' became evident (Tyler 2002). This chain comprises a number of links, each of which must do its job if a journey is to be successfully completed. The basic links in the chain are:

1. information;
2. getting to the stop/station;
3. waiting at the stop/station;
4. getting on the vehicle;
5. travelling on the vehicle;
6. alighting at the destination; and
7. getting to the destination.

If any of the links are broken the journey cannot be completed. This powerful concept illustrates how transport services are part of a system – not just of transport services but also of other processes and pieces of infrastructure. As interviewees and survey participants indicated, there is not enough coordination between different elements of the 'system', and there can be multiple

difficulties with a number of the links along the chain for some people. Unfortunately, putting the chain together is not easy, as each link involves different participants, including State and local government, government instrumentalities, service providers, owners and managers of infrastructure and related services and other individuals and organisations that may assist (formally or informally) along the way. Using the accessible journey chain can be a useful way of identifying how agencies need to cooperate to find ways to narrow the accessibility gap.

It is worth noting that the NSW State Government has recently made it a requirement that contracted bus operators develop Accessible Transport Plans, which must include accessible paths of travel (NSW Ministry of Transport 2004). However, no such plans have been completed to date.

TRANSPORT INTEGRATION

An underlying concept in the discussion above is that of coordination or integration of transport services. Despite the superficial differences between transport modes, they may have more in common than may appear at first glance.

MODAL SIMILARITIES

The close coordination of services may be seen by some as being problematical because of the distinct differences between modal types. Indeed, at times, it appears that each transport mode lives in a different world. On close examination this appears not to be true – indeed the operation of some modal formats may closely replicate the formats in other modes in many respects.

Examples of cross-mode formats that are similar include fixed route bus services (particularly 'corridor' routes) which are similar in operation to rail services.

Regular shuttle services operated by Community Transport groups can be similar to route bus services. Similarly, flexible services operated by the bus industry have a lot in common with Community Transport bus services.

Community transport services also have similarities to taxi operations. Community transport individual transport services are very similar, in an operational sense, to traditional exclusive ride taxi services – a fact that has caused a great deal of friction between the industry sectors in some places over many years.

Maxi taxi group services are also similar to Community Transport group services (and flexible bus services and many courtesy bus services). These service formats come together in the 'Council Cab' concept which is rapidly being introduced into the cities and towns of Queensland and recently in Sydney.[5] Passengers who wish to use the service register with the Cab company and book on the day they wish to travel. They are then matched with other passengers who live in the same area and a Maxi Taxi is dispatched to take them together to their destination such as a shopping centre.

They are operated by a taxi company and the local Council subsidises half of the cost. This is, in effect, a traditional type of Community Transport service, supported by local government but operated by the taxi industry.

The similarities between some service types may presage direct competition between the bus and taxi industries and community transport for a similar, if not identical, market. On the other

hand, as the boundaries between service formats, and in some cases service modes, become increasingly blurred, the scope for further cooperation will emerge.

A CROSS-MODAL BOOKING AND SCHEDULING SYSTEM

Flexible transport operations will be brought together in a new project in Western Sydney, where a new cross-modal demand responsive transport system is under development. This project was funded by the Federal Department of Communications Information Technology and the Arts and a consortium which comprises the software developer, local Community Transport group, two bus companies, a minibus operator, an independent transport planner, a transport development project and the NSW Department of Commerce's HSNet (Human Services Network) Division.

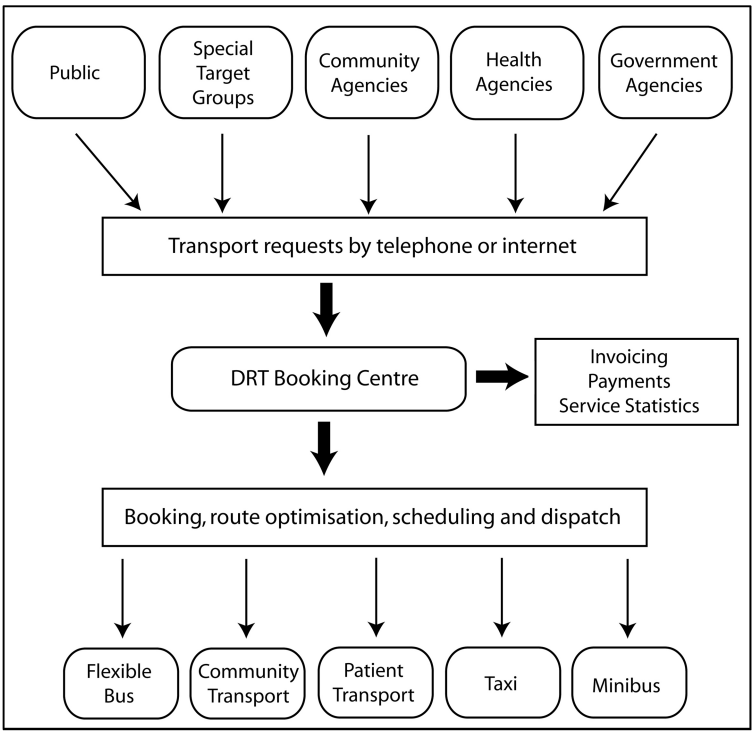

Figure 1 Cross-Modal Demand Responsive Transport

Under this system there will be one booking and scheduling point for all demand responsive bus services, including Community Transport and flexible public bus services. Passengers who require demand responsive or flexible transport will register with the system, indicating any special needs or preferences they may have. They then book services through one central point, either through the internet, by keying codes into a touch pad telephone or by calling a booking centre. The computerised system will allocate them to an appropriate service that matches their needs and, in turn, when all of the bookings have been completed, will schedule each service, optimising the route in the most efficient manner. The services may include flexible bus services

or a community transport service. This will be the first example in Australia of this type of cross-modal approach to booking and scheduling services and will represent a major step forward in using modal mix to actively fit the demand patterns and personal needs of passengers.

TRANSPORT PLANNING

The effective use of different modes and innovative forms of public and community transport cannot, however, be achieved without effective planning. Transport planning is an activity that, in Australia, can only be described as patchy. There are many 'transport planners' in transport companies, government, Councils and other places but there is no consistent training or skills base.[6] Transport planners comprise people who have trained in a variety of disciplines such as Town Planning, Engineering, Logistics and sometimes the Social Sciences. Perhaps because of this, there appear to be few links between planners, despite the fact that they may be working on related tasks. Interviews that were undertaken with 15 planners in a major Australian city in 2005 showed only tenuous links between planners in the Roads Department, the State Planning Department, Local Councils, the Transport Department's Planning Division and among transport operators. These planners had virtually no links with social planners in Councils, the Community Transport Division of the Transport Department, Community Transport and other specialist transport services (Transport Planning and Management 2005a). This may be explained in part by the very different backgrounds of the planners involved or the primary interests of the agencies concerned. A more likely explanation seems to be that few, if any, of them saw their individual tasks as planning for an overall transport system. Each was planning for their own particular purpose, which was not seen to be significantly related to other transport planning functions.

Another problem related to transport planning is the dearth of information about what community members need and want in terms of transport services. 'Community consultations' tend to follow the format of irregular and ill attended public meetings or forums. Community consultation needs to be a two way street where information is both given and received on a regular cycle and where effective feedback loops are established, so that a better understanding can be developed between service users/potential users and transport planners. This approach appears to be rare in the passenger transport industry.

THE INFORMATION LOOP

This collection of information from passengers and potential passengers needs to become part of an information feedback loop if it is to be used effectively. Just as 'consultations' on transport needs tend to be one dimensional (providing rather than absorbing information), the provision of transport information is the same. Transport information is generally provided in a passive format – timetables, service information and maps in paper form, on the web or by telephone. This is true of all forms of transport, mainstream or community based. The telephone enquiry service and web based journey planners break some of this passivity but, at the end of the day, there is only one-way information traffic. Passengers interrogate the databases or timetables but have no opportunity to leave their views and opinions on the transport services that are, or are not, available.

No attempt is made to record the requests for services that do not exist or which cannot be provided. Yet this is invaluable planning information. Where else can transport planners find direct hard evidence of what people require of their transport systems? Direct requests for services

are real and unequivocal – not artificial like the theoretical requests gathered during community consultations. Many community based transport providers collect information on unmet requests for transport and use this to plan for future services. Because this does not happen among mainstream providers, services tend to remain the same, unchallenged and inflexible.

Of course the public's requests for transport will be moulded by the type and history of the services that have been traditionally available. The breadth and range of requests are constrained by the enquirer's knowledge and experience of the system. People will not request a service they do not know of. This is where there is great potential in the more creative use of the web based journey planner. In this case the user is not constrained by service type or form.

This provides a real opportunity to collect planning information in terms of the requests that could not be satisfied.

In summary the information task should be divided into five elements:

1. passive, portable paper based information;
2. interactive telephone or web based information;
3. educational packages/sessions;
4. community based consultations including one off workshops, focus groups and iterative data collection processes based in the community; and
5. data collection processes for unmet or transport requests.

The information, in turn, will be useful to four groups of people:

1. service users;
2. potential service users;
3. service and system planners; and
4. service operators.

Each of these groups both require and provide information to each other (except the users and potential users). When this does not happen the 'system' stultifies, which discourages patronage and, in turn, discourages investment. This results in a downward spiral, at the bottom of which public transport becomes a residual transport option and community transport just an adjunct service to other community care programs rather than a service in its own right.

TRANSPORT CONCURRENCY

Because there are no effective information feedback loops, people make decisions about transport and decisions that affect the need for transport in isolation. Schools and hospitals are built with no thought as to how students or patients will get to them and shopping centres are built in areas remote from public transport, on the premise that most of their customers will drive there. Complaints about this locational disassociation between services and those that use them are generally passed to the local Department of Transport. As often as not, the local Department of Transport has a regulatory role rather than being involved in transport development and is not in a position to resolve the issues.

One way to address this is to use the concept of 'transport concurrency'. Transport concurrency has the potential to address mobility and access issues at their source, by legislating to

place the responsibility for addressing transport issues engendered by major developments with the proponents and developers. Under this model, local jurisdictions develop standards for arterial roads, transport services and other facilities which are used to determine whether the impacts of a proposed development can be met through existing capacity and/or what mitigation might be required. Failure to meet the standards can result in the denial of the development application.

An example of transport concurrency exists in Washington State, USA, where legislation requires that transport improvements or strategies to accommodate development be available when the impacts of development occur. 'Concurrency' for transport facilities is defined in legislation to mean that any needed transport improvements or programs be in place at the time of development or that a financial commitment exists to complete the improvements or strategies within six years (Puget Sound Regional Council 2007).

MOBILITY MANAGEMENT

Another approach that can be used at a local or regional level is that of mobility management. This has been described as 'an institutional state of mind that emphasises moving people instead of the mode of transport' (Murray et al. 1997).

This concept has been used in both Europe and North America over the past 15 years for different purposes. In North America it has been used by State instrumentalities to make more effective and efficient use of human services transport resources.[7]

> The Mobility Manager concept… represents an important alternative for facilitating service delivery to certain target population groups in a community, including addressing the issue of funding integration between public transit funds and human service agency funds (Parker and Associates & International Taxicab and Livery Association 1991).

The idea here is to make better utilisation of existing capacity on buses used by a range of human services, including health services, children's services and social services. In Europe it is commonly used as a method of getting people out of their cars and into more sustainable forms of transport. Addressing issues in human services transport can be a subset of this.[8]

The foundation concept is to establish a clearinghouse for transport information in a given area. On this, other concepts can be built – a travel agency function for example, a booking function, a transport development function etc.

A typical mobility office may provide a market for seats on local transport services (seat sharing in social services transport or yield management on traditional transport services), a clearinghouse for transport transactions (booking, scheduling etc.), linking of travel modes and a one-stop-shop for travel information and bookings. The mobility office can also be the entity that collects, collates and uses unmet requests for transport services in a planning context.

A model in development in outer western Sydney will include four basic functions:

1. consultation and planning;
2. maximising the use of service capacity;
3. service development;
4. facilitating links and referrals between services (including information provision).[9]

In Queensland, the Gold Coast Mobility Office acts as a budget holder for transport funding for older people and people with disabilities. Community care agencies join a Consortium organised by the Mobility Office in order to access funding or resources such as buses, driver hours, volunteer driver subsidies or taxi vouchers. These agencies are, in turn, required to engage in transport planning for the region and to make their vehicles available for use in a vehicle brokerage scheme or register. The Office also addresses youth transport issues through a project jointly funded by all three levels of government.

These models have great potential for further development, particularly in relation to bringing transport modes together as a system and in linking transport information, operations and planning across the industry as a whole.

A FRAMEWORK FOR A TRANSPORT SYSTEM

An effective transport system that addresses the needs of all of its users requires a solid framework. Such a framework needs to facilitate integration at four different levels, policy, the use of policy instruments, planning and operations.

Any effective transport system needs a foundation of clear policies which describe the purpose(s) of the system and how this is to be achieved. Far gone are the days when public transport ran on a commercial basis, with no need for government subsidy. The purpose of those subsidies needs to be clear and unequivocal in order that their effectiveness can be measured and so that there can be transparent public accountability for the funds. Transport policy needs to reflect wider government policies. For example, a health policy of centralisation of specialised services cannot be entirely successful if there is no related policy to ensure that patients will be able to get to the relocated clinics.

The policies, in turn, need to be underpinned by effective and relevant policy instruments. These may be in the form of legislation and regulations, subsidies, concessions or other Community Service Obligation payments. The instruments need to be clearly linked to performance measures, which may include increased access to services by members of the population, less pollution from traffic or reduced congestion on the roads.

There needs to be effective planning not only at an operational level but at a strategic level as well. Transport and non-transport agencies need to be involved in this. Most transport demand is generated by non-transport activities and the agencies responsible for those activities (shopping centres, Health Boards, Educational Departments etc) need to be engaged in the mobility ramifications of their decisions. Equally there needs to be planning across transport modes and services if a transport 'system' is to be developed and the accessibility gap narrowed. Such a system will also need to engage planners responsible for related infrastructure, such as transport interchanges, railway stations, bus stops and the paths and roads that lead to those facilities, in order to develop accessible journey chains.

Finally, there will be a need for transport operations to be integrated, so that passengers can move within the system easily, comfortably and without unnecessary delays between connecting services.

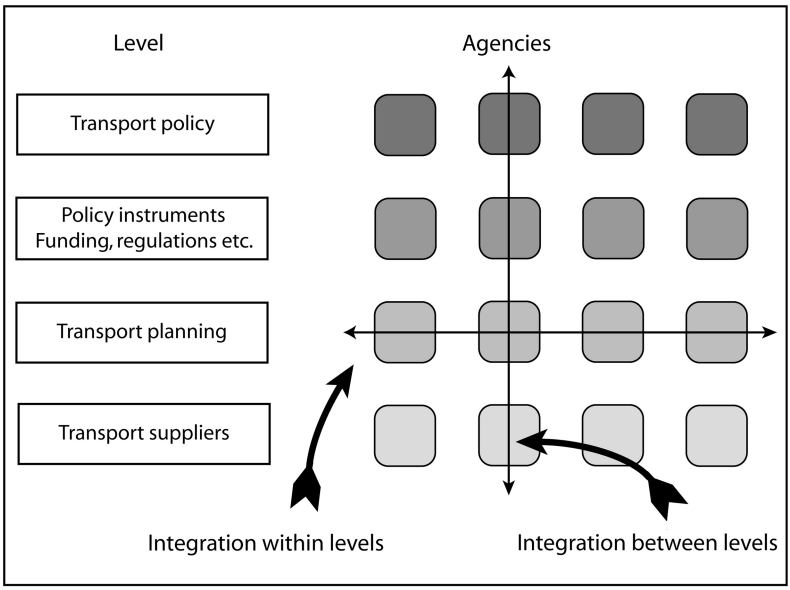

Figure 2 Framework for Transport Planning Integration

At the planning and operational level there is a role for mobility management. This notion can bring a human element and a local scale to transport policy in terms of both traditional public and community transport services. As a service it can be used to collate and disseminate information, to provide a centralised booking function and to act as a clearinghouse for all manner of transport transactions. It can also play an advocacy role in terms of both the operation of services and the related policy settings, be involved in transport development, act as a regional fundholder and provide a focal point for transport planning at a regional level.

The mobility management approach can provide a framework for closing the accessibility gap as it has the potential to address the problem in a number of different ways and in a manner that engages a variety of different players.

Challenges remain however: how should mobility management operate; who should operate it; how can it be resourced etc? These are the immediate challenges for policy makers, funders, planners and operators alike. We look forward to the debate.

ENDNOTES

1 For example, in NSW Community Transport operators are permitted to make use of spare seats on Home and Community Care funded services, however they may only be used by people who are transport disadvantaged, not by the general public.

2 It should be noted that older drivers tend to be in less serious accidents than younger people but if injured they take longer to recover. The latter has negative implications for both the person and the health system.

3 Not all people with disabilities are able to use funded community transport services. For example, to qualify for community transport services funded by the Home and Community Care Program (the most common form of funding for community transport services) a person must be 'at risk of premature

or inappropriate institutionalisation'. The appropriate services may, in any case, not have any vacancies.

4 The survey was conducted during the course of the development of a Community Transport Plan for the area (Northern Sydney Community Transport Plan, published by Accessible Bridge Services 2004). Of the 4,000 people surveyed, 1,900 provided responses.

5 Brisbane City Council currently funds over 160 such services using local taxi companies as the carrier. The Gold Coast City Council has followed suit as has Willoughby Council in Sydney.

6 Although there is no undergraduate course in transport planning in Australia there are moves afoot through the newly established Transport and Logistics Centre to develop a Certified Transport Planner qualification including certification from the Chartered Institute of Transport and Logistics.

7 A number of guides were produced in the 1960s to this end, including a training video called 'Transportation Coordination: A Guide to Making it Work for You' produced by the Rural Technical Assistance Program and a publication 'Building Mobility Partnerships: Opportunities for Federal Funding' prepared for the Community Transportation Assistance Project by the Community Transportation Association of America (May 1996).

8 See http://mo.st for the EU's mobility management strategies for the next decade. Site last accessed June 2006.

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THE WAY TO GO?

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This chapter provides some overall conclusions on the book by the editors in summation of the evidence provided in all chapters. This includes some suggestions for next steps for research and policy to better focus on the problem of addressing transport and social disadvantage issues in Australian society.

THEMES IN A DIAGNOSIS

Significant numbers of Australians have limited choices as to how, and if, they can travel. Poor mobility options place people at risk of being excluded from important aspects of society and thus adversely impact on personal and societal wellbeing. Many young people, older people, people with a disability, those on low incomes and Indigenous Australians experience transport disadvantage. The consequences of transport disadvantage can include reduced educational achievement, poorer job opportunities, less social engagement, less involvement in recreational and leisure pursuits, greater difficulty in obtaining medical services when required, as well as many similar impacts. The achievement of economic and social wellbeing is vulnerable to transport disadvantage. The contributions to the book have provided many relevant illustrations of these problems. While the evidence sometimes lacks hard quantification, it is sufficiently consistent to be compelling.

Perhaps the most important quantified evidence of the relevant linkages between transport and wellbeing has been provided by the recent European Mobilate study (Mollenkopf et al. 2006). That study was a cross-country examination of factors influencing the mobility of older Europeans. It measured subjective wellbeing of survey respondents and found a very strong correlation between this and mobility.

An important consequence of understanding that there is frequently a linkage between transport disadvantage and wellbeing, with sometimes very serious personal consequences (e.g. even to such extremes as people committing suicide because of frustrated life opportunities), is that the potential benefits from reducing transport disadvantage can be far higher than is accounted for by typical transport user benefit assessment techniques. The suggestion is that new approaches are needed to value such initiatives. This matter and a series of related matters are now to be investigated by the editors in a new international research project supported by the Australian Research Council examining the links between transport, social exclusion and wellbeing in Australia.[1] The results from this project are only now starting to emerge and will be the focus of future publications by the editors in this field.

A consistent message from the contributions to this book is that the problems of transport disadvantage, and their associated flow-ons to social exclusion and wellbeing, are most pronounced

in rural/regional Australia and on the metropolitan fringe. While disadvantage occurs in inner/middle areas of capital cities, this is less associated with transport problems for many people, because of higher public transport availability in middle/inner areas. It should be noted, however, that public transport availability may not be the dominant barrier to usage for those people with a disability, for those experiencing racism and for those with a low income.

Given the nature of population growth and change in Australia, including the ageing phenomenon, 'sea-change' and 'tree-change' migrations, plus the on-going trend for population growth to occur primarily on urban fringes and in regional centres, it is reasonable to conclude that the problem of transport disadvantage is getting worse.

Australian settlement patterns make solutions to problems of transport disadvantage difficult. The country is characterised by low density urban settlements, sparse rural/regional development and long distances, famously described by historian Geoffrey Blainey (1968) as 'the tyranny of distance'. High levels of car ownership both contribute to, and are a function of, the low density settlement patterns. Consequentially, achievement of a high level of mobility in the Australian environment almost demands a car, unless you live in inner or middle suburban areas where alternative choices are more likely to be available, including walking and cycling.

It is a recurring theme of the book that car availability is a strong defence against transport disadvantage, particularly if the car is your own. Those who rely on others for lifts achieve mobility benefits from so doing but may lack the benefit of mobility independence and may place burdens on both lift takers and providers. The contributions to the book bring out that this is a particular concern for young people and older age groups, where car availability is less widespread.

Less widely understood, however, is that achieving the independence afforded by car ownership may impose significant financial burdens on some households, their transport disadvantage being displaced by other economic pressures arising from 'squeezed' household budgets. Reference to these issues are noted in chapters 10 and 12 with regards to recent research showing the financial pressures which recent hikes in fuel prices and home loan interest rates have had on low income families living in urban fringe Australia (Dodson and Sipe 2006). This research provides a rare quantitative insight into a problem which has long been acknowledged and termed 'transport poverty' (Gleeson and Randolph 2002). UK researchers have called this 'forced' car ownership (Banister 1994) where low income families have no other transport choice available other than spending a high share of the little income they have on buying and running motor cars. Although the editors' Australian Research Council project into transport disadvantage is only just beginning, initial findings have confirmed that 'forced' car ownership is a dominant issue in urban fringe Australia. Preliminary results suggest that over 20,000 households in fringe urban Melbourne earn incomes below $500/week yet operate more than two cars (Currie and Senbergs 2007). This can represent a share of income of over 50 per cent. The number of 'forced' car ownership households in fringe Melbourne is over 25 per cent larger than low income households without cars suggesting this may be a dominant form of transport disadvantage in fringe urban Australia. The same research shows statistically significant relationships between provision of quite modest public transport service levels and lower levels of 'forced' car ownership (Currie and Senbergs 2007). It is suggestive of a factual basis for the 'social transit' rationale and its associated investment.

The Australian settlement pattern poses viability challenges for alternatives to the private car. Low density development means low travel volumes and relatively high costs per service

kilometre by public transport in outer urban and rural/regional areas. Low public transport service levels produce low usage rates, even though transport disadvantage is likely to be relatively high. Low density development is also unfavourable to walking and cycling options, because of distance constraints. These circumstances have underpinned a search for more adaptive public transport services (e.g. demand responsive) and have also fostered growth in alternative community-based transport solutions. They have also stimulated the quest for a greater understanding of the benefits of improved mobility for transport disadvantaged groups, such that reasonable service levels might be 'justified' in relatively low use environments.

Various chapters in the book have identified the important complementary role played by community transport in Australia. This form of transport is often targeted at particular transport disadvantaged groups (particularly the aged and those with a disability) and assists their social inclusion. However, as several chapters point out, a range of limitations constrain the contribution that community transport can make in reducing transport disadvantage, social exclusion and in improving wellbeing. Some of these limitations relate to the nature of the way services are usually provided. Others relate to funding arrangements, a matter to which we return below.

It is important to recognise that, in many areas where transport disadvantage is concentrated, there are a significant number of transport options potentially available. Apart from private cars, school buses, community buses and taxis are generally widespread across the country and typically under-utilised in rural/regional and fringe urban areas. However, institutional barriers and, in some cases, an unwillingness of stakeholders to adopt a co-ordinated approach, have hampered efforts to use these resources to reduce instances of transport disadvantage. Institutional barriers relate to issues like difficulties in freeing up spare seats on school buses to enable other (transport disadvantaged) people to travel. Resolving such problems potentially provides a very low cost way to improve mobility options in areas where the incidence of transport disadvantage is often high.

A number of chapters have considered the role of various levels of government in tackling transport disadvantage and, in some cases, in adding to problems requiring solutions. National government involvement has been illustrated in the UK and USA, from quite different premises. The UK government notably identified the need for someone to 'own' accessibility planning, a need that was compounded by its own de-regulation of regional public transport. This task was given to local government and Local Accessibility Plans were an outcome. However, national funding to pursue solutions to identified problems has been limited.

The US approach has been more 'rights' based, with targeted funding being provided to assist problem solving for particular categories of transport disadvantage. However, a recent US Federal Government attempt to identify the full gamut of funding provided for transport or transport-related purposes identified over 60 programs but could only identify funding flows for a little over half this number!

An active involvement in local passenger transport solutions from Australian Federal Government is sadly lacking. This acts to exacerbate the Australian 'silo' approach to problem solving and transport operations noted in many chapters. Without national leadership and direction it is increasingly hard for local governments and agencies to coordinate efforts from a 'bottom up' perspective. In addition significant gaps emerge in the Australian context where lessons from local initiatives are not shared nationally and limited resources are expended in 'reinventing the wheel'.

In the US it is a Federal initiative which has acted to improved co-ordination at local/regional level, mandating this as an eligibility condition attached to funding flows to lower governments. In the UK, National Government has mandated the accessibility planning approach for all local planning. This acts to focus on filling gaps in accessibility and also encourages greater co-ordination and consultation. A number of chapters in this book have highlighted how co-ordination weaknesses are hampering reduction in transport disadvantage in Australia. For example:

- lack of co-ordination between social/economic policy agencies and transport agencies at State government level in conceiving and targeting programs;
- lack of co-ordination between various levels of government in supporting travel by transport disadvantaged groups/individuals;
- lack of co-ordination at regional/local level in terms of needs assessment and priority identification in relation to tackling transport disadvantage;
- lack of co-ordination between various service providers in meeting travel needs of transport disadvantaged groups.

These examples illustrate the inherent conflict between place and function in transport service provision. Government agencies are typically organised along functional lines but problems of transport disadvantage are more commonly place-based for particular types of people. Place-based problems demand a strong regional/local role in their resolution, which poses a challenge to the dominant Australian transport service provision model, which is State run.

An important theme of the book has been the identification of the importance of the car as a means of avoiding or reducing transport disadvantage. While the problem of 'forced' car ownership has been acknowledged, it is important to recognise that the car will continue to be central to assuring social inclusion of very large numbers of Australians. This reality raises a number of issues.

Car use must be managed in such a way that it does not reduce environmental sustainability or add unnecessarily to the high economic costs of traffic congestion. This means that pressures must be accelerated to reduce greenhouse gas emissions from car use and to better manage demand for road use, especially at peak periods. This also entails dealing with the interface between cars and the movement of freight, the latter having shown significant growth over the past few years. Much of the travel demand from transport disadvantaged groups is not geared around peak times and commonly occurs in regional/rural areas, which mitigates some of the potential adverse impacts. However, with options such as congestion charging being one likely long term mechanism to help manage road use in congested conditions, it is important to ensure that this is done in such a way that it does not compound problems of transport disadvantage. Some of the solutions suggested later in this chapter to reduce transport disadvantage in fringe urban areas will assist in this regard.

In recognising that the car will remain important in tackling transport disadvantage, it is timely to recall the reminders of the Hensher, Browning and Sims chapters, that attention must be given to ensuring that the car and its environment are made more friendly for an ageing driving cohort. This means attention to the vehicle, the driver as well as the road environment.

WAY TO GO

Although the focus of much analysis in this book has been framed around particular groups who are likely to be transport disadvantaged, there are a number of recurring themes about possible solutions that cut across the group divide. Approaches to reducing transport disadvantage might generally be grouped under a number of broad headings:

- Needs assessment – better understanding the travel needs of transport disadvantaged groups/individuals. Part of this involves improving understanding about how to best convey information about the availability of transport options;
- Service provision – improving service levels and options to meet these needs;
- Institutional arrangements – improving co-ordination between various stakeholders and within and between levels of government to deliver more effective and efficient outcomes. This also includes knowledge development about the close links between economic and social wellbeing;
- Research – to extend understanding of the nature of social exclusion and the links between transport, social exclusion and wellbeing.

These issues occur against a background of place, particularly urban fringe and regional/rural areas. The place context provides an opportunity in some cases to pursue solutions that target the needs of several transport disadvantaged groups at the same time.

NEEDS ASSESSMENT

A typical approach to travel needs assessment has been for planners and researchers to assume knowledge about people's needs, perhaps inferred from observation of behaviour. This approach is typical of needs assessment for mass transit. However, dealing with transport disadvantage and its links to social exclusion and wellbeing requires more direct inputs on travel needs from the particular categories of people involved. In effect, transport disadvantaged people, or at least their representatives, become directly involved in needs identification, because of the relatively high level of specificity of some of these needs. Such an approach was illustrated in most of the chapters in Section 3. These findings show that often the needs of transport disadvantaged people differ in some aspects from mainstream users. However, the value to transport disadvantaged people and society at large of providing specific services to meet these needs, even at greater cost, provide important personal and socio-economic benefits in the longer term.

SERVICE PROVISION

A wide range of transport services are already provided to target the needs of transport disadvantaged groups but there are still significant gaps and shortcomings within the current set of options. A recurring theme of the book has been ensuring that transport disadvantaged groups have mobility options. These can range from the private vehicle, either as driver or passenger, through public transport, community transport, taxis, cycling and/or walking. In this overview of the way to go, three areas are highlighted: cars, public/community transport and walking/cycling.

Private cars, as noted in the chapters by Hensher, Browning and Sims, will remain an important means of transport for seniors. The numbers of seniors are rising and they are therefore an in-

creasing proportion of the travelling public. It is therefore important to ensure that developments in vehicle technology and the operating environment are friendly towards their needs.

A common finding of many chapters of this book has been the need to improve public transport service levels in urban fringe/outer areas and in regional and rural Australia, to reduce transport disadvantage. This argument is primarily founded on a notion of social justice, of ensuring that all people, irrespective of personal circumstance, have the possibility of engaging in most of the activities that are available within their community. This argument sees transport in a similar vein to education, as a 'merit' good that needs to be able to be consumed in at least minimum quantities to provide the foundation for inclusion. It is consistent with the capabilities approach to wellbeing. That approach, as outlined by Nussbaum (2005), proposes ten capabilities that are central to wellbeing, about half of which require a reasonable level of mobility for their achievement.

This leads, in turn, to the idea of establishing acceptable minimum service levels that should be available to people in particular types of locations, specified in terms of service spatial coverage, frequency, span of operating hours and days on which services operate so that most people can achieve acceptable mobility levels, without the need for a car. Service availability would be expected to reduce with population numbers and densities. By way of example, in outer metropolitan areas, the editors would expect to see at least hourly public transport services for seven days a week, from 6.00am start to 9.00pm start of last service on weekdays, to midnight start on Saturdays, and from 8.00am to 8.00pm on Sundays. Services might end slightly sooner in regional centres and be non-existent in rural areas. In rural areas, however, it would be expected that connections to regional centres would be available on a regular basis and that complementary usage of community and school bus transport would be available.

A number of chapters have noted how this would benefit specific transport disadvantaged groups. The editors conclude that there is no other non-car based option that is likely to be so universally advantageous to transport disadvantaged groups in urban and regional contexts. In most cases the relevant service required will be provided by bus, because of the economics of service provision at low density. Of course, such provision would also improve the transport options for those not considered to be disadvantaged.

Because of the unfavourable economics of route bus service provision in low density settings, there is great merit in exploring alternative options in low demand settings. This might involve greater use of demand responsive bus services, use of school/community buses or using taxis as a complementary service at some times/places. Institutional arrangements need to be sufficiently flexible to encourage pursuit of such options, a matter to which we return below.

Walking and cycling are frequently neglected options within the range that might play roles in reducing transport disadvantage. Walking and cycling both have particular merit, because of their positive health benefits, although the distance barrier in many Australian travel settings can limit the contribution these options might make. This is particularly so when it is recognised that the major transport disadvantage problems are often located in places where walking and cycling are likely to be least feasible (low density outer urban, regional and rural areas). The authors conclude that the design of future settlement patterns should give particular attention to increasing the potential for walking and cycling. While this would increase travel opportunities for some transport disadvantaged groups and individuals, it would also have the wider benefit of reducing greenhouse gas emissions from personal transport.

URBAN PLANNING – THE MISSING LINK

In chapter 11 Dr Dodson has shown how car dependence resulted from an urban planning system which was led by housing market demands for urban space made possible through the emergence of the 'affordable' car. Urban sprawl, low density and sparse living, remote from facilities and services, is the result. The same chapter illustrates the serious frustrations which numerous commentators have had with 'smart' growth based planning strategies which have sought to curb urban sprawl and provide alternatives to car dependence in the suburbs. It is a sad fact that, in relation to transport, much of urban Australia is just not sustainable from a social, economic or environmental viewpoint. We suggest that the slow pace of Australian governments in providing realistic alternatives to the private car in fringe urban Australia is because trying to retro-fit sustainable passenger transport systems into these contexts is a significant technical, political and economic problem certainly in the short to medium term.

It is clear that there is a substantive need to change urban planning policies which have created the urban form which generates transport need and car dependence in fringe urban Australia. Smart growth, urban densification and the concentration of transport disadvantaged groups into locations with walkable facilities, services and public transport seems a more logical focus for urban planning. However Australia faces a significant conflict between the market driven demand for cheap urban housing with large lot size living and the socially and environmentally based planning philosophy of densification. It is not part of Australia's planning history to actively impede market driven housing demands and planning efforts to encourage densification can prove weak without the political 'teeth' to enact change. There is a growing need to question the market based rationale for large lot fringe urban living and to cast doubt on social trends which have Australians ageing in place in isolated suburban/rural settings while 'sea-change' and 'tree-change' migration further exacerbates the scale of the future isolation problem for the Australian community.

In the interim there seems to be much merit in the 'Social Transit' agenda such as that being followed in fringe urban and regional Victoria to provide a minimum standard of service to assist those with limited options.

INSTITUTIONAL ARRANGEMENTS

Widening the range of options that is available to tackle transport disadvantage can only be effectively pursued when there is strong local ownership of the accessibility problem and much greater co-ordination between the various stakeholders involved. The layers between and among which co-ordination must improve were summarised above, suggesting the complexity of the task. Local ownership of the issue is the critical clue to unlocking this possibility, since that is where most transport disadvantage takes place and where most solutions need to be delivered.

With one notable exception (Brisbane), Australia is unusual in having transport service provision as a State Government responsibility. It is more usual internationally to have responsibility for transport services, including public transport services, vested at the regional or local level, since that is closest to where the benefits arise and the costs are incurred. While Australian local governments have been active participants in local road planning and building, their role in terms of accessibility planning directed at transport disadvantaged groups has generally been negligible, other than for a somewhat limited involvement in community transport. It is arguable that

making significant progress in tackling transport disadvantage in Australian urban fringe, regional and rural areas will be significantly hampered unless there is a change in the balance of powers, responsibilities and access to funds between State, Federal and local governments for needs assessment and service delivery directed at transport disadvantaged groups.

Some State Governments have responded to this challenge by funding the employment of regional/local employment brokers, working with local management groups. The editors are concerned, however, that this leaves ultimate control at State level in an unequal power relationship. Local 'ownership' or 'buy-in' seems likely to be compromised in this circumstance. An alternative approach is to devolve some funding sources to regional/local level and, with this, the responsibilities to assess and prioritise needs and co-ordinate (some, at least) supply side responses. Federal funding that is devoted to transport services, e.g. the HACC program, might be dealt with in this way, together with any existing State funds that are directed to transport disadvantage programs. Federal and State Governments would still be able to increase funding availability, in accord with their priorities, but there would be a more equal partnering relationship if the regional/local level had more autonomy and responsibility for accessibility planning, needs assessment and priority determination and resource co-ordination. Several chapters have raised the idea of an arrangement such as a Regional Accessibility Planning Council or Mobility Council as a key regional planning and co-ordinating mechanism in this regard. This approach should be trialled as a comparison to existing approaches that are more State dependent.

RESEARCH NEEDS

This book has demonstrated that there is a growing evidence base of significant connections between transport disadvantage, social exclusion and wellbeing. However, there remains a shortage of hard data about the strength of the relationships/linkages in specific circumstances and of the scope to improve wellbeing by suitably targeted approaches. This shortage has stimulated a major international research project led by the editors which is supported by the Australian Research Council. The goal of this project is 'to investigate wellbeing, social exclusion and transport disadvantage with reference to metropolitan, rural and regional Victoria'. The project aims are to:

1. Evaluate travel and activity patterns to contrast behaviour between the transport rich and transport poor and for social groups which may be considered advantaged and disadvantaged
2. Investigate links between activity travel patterns and the ease of access to transport
3. Assess links between activity travel patterns and the elements of social and economic advantage/disadvantage and general social wellbeing measures
4. Evaluate poor access to transport as a cause of social exclusion and to understand how this relates to other causes of social exclusion
5. Develop a comprehensive understanding of the mechanisms influencing the travel and activity behaviour of transport disadvantaged people to a high level of detail and depth
6. Measure how public transport, community transport and human services transport provided to meet transport needs relates to the travel and activity behaviours of the transport disadvantaged
7. Identify the mechanisms and impacts of 'forced' car ownership for low income families including a study of 'coping' strategies related to limited transport

8. Examine the impacts of higher fuel costs on the transport disadvantaged
9. Investigate the social and economic benefits of access to public transport for the transport disadvantaged
10. Assess residential location decisions and the extent to which transport disadvantage results from a conscious home location decision.

The project commenced in late 2006 and is expected to report findings over the next three years.

In addition, the book has raised a number of related research questions which need to be addressed into the future:

- Identifying effective models for public transport service delivery in fringe urban, regional and rural Australia
- Approaches to optimising the car as an inclusive community resource for access of all
- Approaches to manage car driver cessation in an ageing population
- Approaches to inclusively design transport operations and infrastructure for an ageing society
- Optimising urban planning approaches in relation to social transport needs in the Australian context
- Addressing transport disadvantage associated with the 'sea-change' and tree-change' migration trend.

OUTCOMES DESIRED

Disadvantage is both a personal and societal burden. Personal disadvantage should not be tolerated on grounds of equity and social justice. The burden on society of not addressing disadvantage is also increasingly being understood. As outlined in the introduction and in Professor Paul Smyth's chapter, the cost of disadvantage is not commonly factored into cost benefit analyses. This is partly because of incomplete analysis and/or evaluation myopia. For example, the costs of disadvantage are largely met in the longer term in terms of welfare payments, taxes forgone and reparative services, such as health service costs. Promoting personal wellbeing through the provision of essential infrastructures – health, housing, education and transport is ultimately a cost saving, an investment in the health and future productive capacity of people. These wide benefits are rarely acknowledged and even less frequently included in cost-benefit analyses of transport initiatives.

Minimum public transport service levels, in terms of frequency, coverage, ease of use and safety, provide a safety net in terms of minimising likely transport disadvantage. Just what an appropriate minimum standard should be will depend on location, as outlined above, and be informed by future research, such as the Australian Research Council project summarised above. However, it is likely to be higher than what is presently on offer in most Australian urban fringe, regional and rural areas.

Minimum service levels provide a travel option for most members of society, known in social policy as a universal system. Alongside this there is a need for a secondary service system which links people with particular needs to the universal system. This can be understood as community transport, flexible bus systems and taxis etc. The balance between these systems should be well understood. The secondary system should be just that, not a system which competes with the

universal public transport system, as is the trend in some community transport systems being currently promoted.

Secondary transport systems build capabilities of disadvantaged groups. The higher unit cost of these services can be justified by reference to the correspondingly high value they offer to benefiting individuals and society. While community transport will be the only possible form of transport for some people, particularly those with considerable disability, there should be an effort to move people from community transport to the universal public transport system as much and as soon as possible. When this approach is taken, people who are experiencing disadvantage will be less likely to also feel exclusion.

The value (benefit) ascribed to a disadvantaged person using the universal (public) transport system should also be recognised as likely to be higher than for a person without such disadvantage. Valuation of this differential might provide an economic case for the specification of minimum service levels. In the absence of such valuation, the argument for minimum service levels can rest only on social equity grounds. Some would go further and argue that a cost-benefit valuation foundation is simply inappropriate to such issues and the social equity argument alone should be sufficient to argue the case for minimum service levels. The editors support the social equity case in the current state of knowledge but strongly support research to value the benefits of improved mobility, from a broad perspective.

AN INCONVENIENT TRUTH!

Looming over the issue of transport disadvantage for the future is the issue of climate change. Transport is the third largest and second fastest source of greenhouse gas emissions in Australia and needs to be part of the solution. Responses to climate change in transport (e.g. carbon pricing) are likely to contribute to greater patronage on public transport. These responses are also likely to increase the costs of car use in urban fringe, regional and rural areas. This will compound problems for disadvantaged groups who currently rely on car use for mobility. As a consequence, enhanced provision of alternative transport options to the car, such as public/community transport, walking and cycling, becomes both more important and more justified, on both social equity and environmental grounds.

Climate change is underlining the inherent unsustainability of Australia's current urban structure. Low density, car-dependent settlement patterns create high carbon emissions that, in the face of likely national emission reduction targets of 60–80 per cent by 2050, will drive an extensive search for achievable emission reduction strategies. Increased public transport mode share and increased car occupancy rates can make useful contributions. Mandatory fuel efficiency targets also seem essential, particularly given the lack of real progress in reducing the fuel intensity of the Australian vehicle fleet over the period since 1990. Strategies to reduce the need to travel by car will also be essential over the long term, as selectively changing settlement densities becomes possible. Australia's cities are likely to become more poly-centric over coming decades, with attendant benefits in terms of improved walkability, increased cycling opportunities and more cost-effective public transport operation. All should help to simultaneously reduce transport disadvantage while tackling environmental sustainability.

A further longer term consideration relates to the boundary between 'public' transport and 'private' cars. Reducing the hardness of this boundary may facilitate improved mobility for some

disadvantaged people. Small inroads can be seen in schemes where there is rental or free use of public bicycles in some cities and Melbourne offices. The concept of ride-sharing in rural locations, use of high occupancy vehicle lanes in congested urban conditions, and use of mini buses or taxis as a form of public transport, are also illustrative of this likely development.

CONCLUSION

This book has provided much evidence that transport disadvantage is a pervasive and growing part of Australian living. Serious questions have been raised about the restrictions placed on life opportunities of marginalised Australians. In short, they have 'no way to go'. If Australians continue to seek a wealthy, fair and equitable society there is a national need to address the serious inequalities in access which have been raised in this book. In short, as a nation, the current approach is 'no way to go'.

ENDNOTES

1 Australian Research Council Industry Linkage Program Project LP0669046, 'Investigating Transport Disadvantage, Social Exclusion and Well Being in Metropolitan, Regional and Rural Victoria': Monash University in association with the University of Westminster (UK), University of Ulster (UK), Department of Infrastructure, Victoria, the Bus Association of Victoria and the Brotherhood of St Laurence. The chief investigators are Prof G. Currie, Prof T. Richardson, Prof P. Smyth and Dr D. Vella-Brodrick. The partner investigators are Prof J. Hine, Dr K. Lucas, Mr J. Stanley, Dr J. Morris, Mr R. Kinnear and Dr J. Stanley.

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NO WAY TO GO

TRANSPORT AND SOCIAL DISADVANTAGE IN AUSTRALIAN COMMUNITIES

EDITED BY **GRAHAM CURRIE, JANET STANLEY** AND **JOHN STANLEY**

Urban sprawl and sparse living are pervasive in Australia. Despite high levels of car ownership, many Australians do not have access to a private car for their travel needs. These people – often from marginalised groups in society such as those on low incomes, older people, Indigenous Australians, and those with disabilities – face difficulties accessing services, facilities and activities. What are the personal and social costs of lack of access to transport in terms of individual and community well-being? How, and to what extent, do poor transport options contribute to disadvantage?

No Way to Go is an edited collection of papers that discusses the links between transport disadvantage and its impacts on social exclusion in Australia. The book begins by exploring the global context for the Australian experience, with a series of papers from international contributors. In the second section, case studies based on recent empirical research examine the situation from the perspectives of different marginalised groups in Australian society. The book concludes by examining the implications for Australian social and transport policy.

No Way to Go will be of interest to researchers and students of social policy and transport studies, as well as policy makers at all levels of government, and social and transport practitioners in the field.

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