



UNIVERSITY OF LEEDS

This is a repository copy of *International Perspectives*.

White Rose Research Online URL for this paper:
<http://eprints.whiterose.ac.uk/79354/>

Version: Accepted Version

Book Section:

Lucas, K and Markovich, J (2011) International Perspectives. In: Currie, G, (ed.) *New Perspectives and Methods in Transport and Social Exclusion Research*. Emerald Group Publishing , 223 - 240 (17). ISBN 1780522002

Reuse

Unless indicated otherwise, fulltext items are protected by copyright with all rights reserved. The copyright exception in section 29 of the Copyright, Designs and Patents Act 1988 allows the making of a single copy solely for the purpose of non-commercial research or private study within the limits of fair dealing. The publisher or other rights-holder may allow further reproduction and re-use of this version - refer to the White Rose Research Online record for this item. Where records identify the publisher as the copyright holder, users can verify any specific terms of use on the publisher's website.

Takedown

If you consider content in White Rose Research Online to be in breach of UK law, please notify us by emailing eprints@whiterose.ac.uk including the URL of the record and the reason for the withdrawal request.



eprints@whiterose.ac.uk
<https://eprints.whiterose.ac.uk/>

International Perspectives on Social Exclusion Research in Transport

Karen Lucas and Julia Markovich

Transport Studies Unit
University of Oxford
South Parks Road
Oxford, OX1 3QY
karen.lucas@ouce.ox.ac.uk

(Chapter 6.1 pp. 223-240 in Currie, G. (ed) 2011 *New Perspectives and Methods in Transport and Social Exclusion Research* Bradford: Emerald Publishing Ltd.)

ABSTRACT

Purpose

This chapter reviews the key findings of the Melbourne study using the wider international literatures on transport and social exclusion as its conceptual framework. It begins by briefly summarising the research and policy context in which the study is set. It then provides an overview of major conceptual, theoretical and methodological advancements relevant to this area over the last ten years in order to evaluate the study's contribution of the Melbourne study to research, policy and practice internationally.

Methodology

The conceptual framework for this chapter is based on a comprehensive review of the international literatures on transport and social exclusion. After a brief introduction to these, it outlines key conceptual, theoretical and methodological advancements as they pertain to transport-related social exclusion. In addition, it evaluates the scope and implications of the Melbourne study's methodological approach with particular reference to contemporary scholarly debates in this area. The chapter subsequently explores the applicability of the research in policy and practice, both inside and outside the Australian context.

Findings

The chapter concludes that the Melbourne study has made a significant contribution to conceptual, theoretical and methodological developments within the area of transport-

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

related exclusion, and has helped move forward related debates within policy circles. Opportunities for further research are also identified.

Abstract word count: 208

INTRODUCTION

Social issues in transport have traditionally been viewed as secondary or even tertiary concerns, especially when compared with more primary considerations, such as economic and environmental impacts (Guers et al., 2009). As Forkenbrock et al. (2001: 81) observe: “*It is clear that the profession is better equipped to assess economic effects than social effects*”. Whilst the reasons for this are multiple, a contributing factor is that the knowledge base is currently fragmented across a number of disciplines, including: spatial planning; human geography; social policy and sociology; public health; engineering; and of course, transportation; each with their own dominant approaches and methodologies. Most probably related to this is that relatively little attention has been paid to the development of robust and usable methods and models for the systematic measurement and assessment of social equity issues in transport within different social, geographical and institutional contexts (though see Thomopoulos et al., 2009 for recent initiatives in this regard). Indeed, as Sinha and Labi (2007) observe, the breadth, variability and complexity of social issues has meant that their assessment within transport is a ‘relatively inexact science’ (p. 427), lacking the standardization and hence popularity of other more established methods.

It is possible to assert, therefore, that in the main (i.e. across the developed and developing world transport and at every level of the decision-making process), transport investment decisions are still predominantly based on modelling aggregate demand, supply and activities information and rarely, if ever, consider the disaggregated social impacts of these decisions (e.g. Bröcker et al., 2010; Geurs et al., 2009; Thomopoulos et al., 2009). This means that the different activity needs and capabilities of diverse populations in very different social contexts are largely ignored, and perhaps most ironically, new investments in public transport services tend to least benefit the very social groups which are most in need of enhanced mobility and accessibility opportunities.

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

The policy position appears to be changing somewhat in recent years, with far greater willingness amongst transport professionals to understand the need to deliver socially just and geographically balanced policy outcomes and to be more willing to set quality of life, opportunity-based and people-focused targets for transport systems delivery (Department of Transport, 2006; World Bank, 2006). Conversely, consideration of the transport and accessibility needs of populations is rarely a feature of social policy decision-making (Lucas, 2004). Previous studies have demonstrated (DHC and University of Westminster, 2004), for example, that many policymakers outside the transport sector fail to see the relevance of their own areas of public service delivery to the mobility and accessibility outcomes of their client-base. This suggests that exploring ways to identify and communicate the different interactions, relationships and dynamics between transport disadvantage, social exclusion and wellbeing to these other sectors is still an important focus for further research enquiry. It is ultimately within this context that the contributions of the Melbourne research study should be assessed.

CONCEPTUAL AND THEORETICAL INNOVATIONS

It is important to note that the conceptual development of transport-related social exclusion is still in its infancy. It was not until the late 1990s that the academic and policy literatures began to trace a potential relationship between transport inequality on the one hand and the wider outcomes of social exclusion on the other (e.g. Church et al., 2000; TRaC, 2000; Hine and Mitchell, 2003; Lucas et al, 2001). Consequently, core definitions and theoretical explanations of the phenomenon are still being elaborated and refined. Early studies in this area offered three notable departures from existing research on transport disadvantage, in that: i) they identified the social consequences associated with lack of transport in terms of reduced life-chances and opportunities; ii) they differentiated between those constraints that predominantly rest with the affected individuals themselves, such as their personal abilities, skills, resources and capacities to access the transport system, and those that are predominantly determined externally by the system of provision, such as the location of local services, the levels and quality of public transport provision, travel information and so forth; and iii) they gave ‘*voice*’ to the lived experiences of affected

individuals, with the aim of directly articulating their concerns to planners, policy makers and service providers.

A review of the academic literature of the time reveals a plethora of predominantly UK-focused studies that largely emerged in response to the social welfare concerns of the then newly elected New Labour administration (Social Exclusion Unit, 2003; Department for Transport, 2006). These studies primarily aimed to, either: a) extend or challenge emerging definitions of transport-related social exclusion (e.g. Kenyon et al., 2003; Hodgson and Turner, 2003; Rajé, 2004; Grieco, 2006; Farrington, 2007); and/or: b) develop and test new methodological approaches, metrics and tools for the measurement and monitoring of accessibility- and mobility- related disadvantage (e.g. DHC and University of Westminster, 2004; Preston and Rajé, 2007; Jones and Wixey, 2008; Mackett et al. 2008). In a few rare instances, they also sought to calculate a social value for the new transport initiatives which had been specifically introduced to reduce social exclusion in low income neighbourhoods (Bristow, 2008; Lucas et al., 2008).

Although no single definition of transport-related exclusion exists, the early literatures served to establish that it is a highly contextually-specific phenomenon; that different social groups in different physical circumstances and locations are likely to be affected to a lesser or greater degree by these different exclusionary factors; and that often their experiences are relational to the wider travel contexts in which they are situated.

Conceptual advancements

Overtime, the literature has expanded to include a more diverse international scope, with recent contributions coming from researchers in Oceania (e.g. Hurnie, 2006; Currie et al.; 2007; Rose et al, 2009)¹; mainland Europe (e.g. Ohnmacht et al, 2009; Priya Uteng, 2009) and North America (e.g. Martens, 2006; Leck et al, 2008; Levinson, 2009; Páez et al., 2009; 2010; Casas et al., 2009). Some of these contributions will be discussed in greater detail in later sections of this chapter.

When considered as a whole, it is sufficient to state that these studies predominantly serve to reinforce the highly context-specific, personalised, multi-dimensional and

¹ And also featuring many publications arising from the Melbourne study which is the main focus of this volume.

dynamic nature of the transport and social exclusion relationship. It is clear that whilst the concept of transport-related social exclusion is broadly accepted as a useful approach by scholars from different disciplinary perspectives, as well as by different national governments and policy sectors, exactly how this is understood and conceptualised varies greatly across the literatures.

This variability in approach is particularly evident with regards to understanding which social groups are most likely to be affected, which journey and activity types are important to consider, the physical geographies of affected population groups and the most appropriate interventions for addressing this social phenomenon. This in turn means that the focus of the research is also highly varied. For example, some studies tend to emphasize the unmet transport needs of carless households, whilst others are more concerned with the accessibility problems of particular transport-disadvantaged social groups, such as mobility-impaired or disabled populations (e.g. Casas, 2007; Church and Marston, 2003), children (Casas et al., 2009), older people, women and lone parents (e.g. Páez et al., 2009), or ethnic minorities (e.g. Rajé, 2004). Still others concentrate on geographical or spatial-based exclusion, such as that experienced by suburban or rural communities. In doing so, these studies sometimes entirely overlook the 'poverty' dimension of the social exclusion policy agenda (Hills et al, 2002; Byrne, 2005; Marlier et al., 2007), which tends to undermine, rather than enhance, the previously unique contribution of the UK research to social policy understandings of the role of transport, compared with other more generalised studies of transport disadvantage.

Theoretical and methodological innovations

On the other hand, a review of this literature also reveals innovative conceptual frameworks and methodological approaches, including most interestingly: accessibility and time-geography perspectives (e.g. Cass et al., 2005; Dijst and Kwan, 2005; Neutens et al., 2011), personal activity spaces and time/space path analysis (e.g. Schonfelder and Axhausen, 2003; Paez et al., 2009; 2010; Priya Uteng, 2009) and explorations of the relationships between personal 'network capital' (Urry, 2007), social networks (e.g. Carrasco and Miller, forthcoming), and social capital (e.g. Currie and Stanley, 2008; Stanley et al, 2010). An overview of some of the key innovations within the literature is presented within the following subsections.

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Accessibility approaches

As Cass et al. (2005: 540) observe the concept of accessibility has become: *'increasingly influential in current thinking about the causes and consequences of social exclusion'*. It is commonly viewed as *'an index of exclusion'* (Casas, 2007: 465), and is valued for its role in enhancing an understanding of how people are able to participate more fully in the activities associated with everyday life (Páez et al., 2010). Research in this area centres around the concern that inadequacies in the provision of transport and the unequal distribution of activity opportunities across geographical space may foster social exclusion by generating accessibility limitations that bear disproportionately on certain individuals and groups.

Within this emerging literature, more recent scholarly attention has been dominated by two closely related aspects of individual activity-travel behaviour. The first aspect deals with individuals' ability to participate in desired activities and is generally studied through GIS-based accessibility analysis. Two sets of studies about accessibility and social exclusion can be discerned. First, several studies have concentrated on the spatial and transport network constraints faced by different population groups and how these can be overcome with system-based improvements (e.g. transport investments) at either the micro or macro level of transport policy-making and planning.

These studies have proposed place-based accessibility deprivation indicators to identify spatial mismatches between the home location of affected population groups and key service destinations (Scott and Horner, 2008; Páez et al., 2010; Langford and Higgs, 2010). Previous research (ibid.) has employed, for example, the number of services accessible within a certain travel time from the home location, or distance to the closest service. Second, there are studies that have focused on the temporal influences of macro changes over the last fifty years; such as the erosion of collective time rhythms and the rise in dual-earner families, and the new time-space inequalities that have emerged from these changes.

Personal activity spaces and time/space paths

It is important to recognise that physical accessibility is not the only element of transport-related social exclusion. As Páez et al. (2010) observe, accessibility research has increasingly involved more refined indicators, and moved beyond

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

defining accessibility at an aggregate level (as in conventional, location-based measures) towards an individual accessibility framework informed by the time-geography approach. The focus here has been on the measurement of the area where a person's space-time path is concentrated within a certain time period using geographical information systems (GIS).

The size of this so-called activity space has been viewed as an indirect measure of social exclusion because the lack of exposure to certain parts of an urban area or settlement may engender fewer employment opportunities and more restricted social contact (Newsome et al., 1998; Schönfelder and Axhausen, 2003; McCray and Brais, 2007; Lee and Kwan, 2011). Drawing on insights from centrophobic statistics (Beckmann et al., 1983a; 1983b) and spatial ecology (Jennrich and Turner, 1969), the size of activity spaces associated with everyday life has been modelled through such concepts as confidence ellipses, bi-variate kernels and minimum spanning trees (Schönfelder and Axhausen, 2003; Buliung and Kanaroglou, 2006).

Whilst both conventional and space-time accessibility approaches have their advantages, each has its own limitations in practice. Conventional measures of accessibility are valued for the generalisability of their findings (e.g. Páez et al., 2010), yet they have been criticised for not being able to adequately account for such detailed elements as the effects of trip-chaining, the interdependence of daily activities, or temporal constraints (Casas et al., 2009; Schwanen and de Jong, 2008).

This line of inquiry has integrated activity-scheduling concepts into person-based indicators of accessibility to probe into the role of spatiotemporal constraints in preventing people from participating in activities. Many of these studies offer a gendered perspective (e.g. Kwan, 2000; Schwanen et al., 2008; Hanson, 2010), as women are often viewed as particularly disadvantaged due to the multiple caring and other domestic responsibilities that they are still more likely to assume (such as care for children and adults, household shopping and the 'school run'), and their relative over-reliance on public and active transport compared with men (e.g. Hamilton and Jenkins, 2000). Researchers have also considered other vulnerable groups including children (e.g. Casas et al. 2009), the disabled (e.g. Church and Marston, 2003), older people (e.g. Ziegler and Schwanen, 2011) and ethnic minorities (e.g. Priya Uteng, 2009).

The role of transport in supporting people's social networks and social capital

Although there is a long tradition of analyzing the relationship between social networks and social exclusion (Phillipson et al., 2004), transport has only recently been included as a key factor due to the recognition that a relevant portion of human travel has a motivation to interact with others (Axhausen 2005). By studying people's social networks it may therefore be possible to more fully understand the impacts of transport decision-making in terms of broader societal concerns, such as promoting social inclusion and cohesion and maintaining social capital (Cass et al., 2005).

Urry (2002) for example, argues that full, active, and engaged members of society require social capital within localities, and that their participation involves transportation and mobility. In a similar vein, Currie and Stanley (2008) claim that the role of transport in social capital has been overlooked, with a need to better understand how transport addresses social disadvantage through the provision of mobility. These scholars identify "plausible links" between transport and "positive" social interaction, such as the role of car dependence, spatial relations, co-presence, and well-being. At the same time, the literature still tends to focus mostly on theoretical developments (e.g., Doi et al. 2008), although a few studies (Hartell, 2008; Farber and Páez 2011) have started to empirically examine links between social capital and transport.

Carrasco and Miller (forthcoming) offer a promising approach in this respect through their explicit study of individual personal networks, as a way of capturing where social exchange occurs, as well as challenging the predominant (narrow) vision of social capital and community as a local-area based phenomenon. Other recent work has focused on issues such as the relevance of social influence of transport related decisions (e.g., Dugundji and Walker, 2005), the role of social networks in activity-travel planning (e.g., Schwanen 2008; Carrasco and Miller forthcoming), the spatial patterns of social activity-travel (Carrasco et al. 2008b; Ohnmacht et al., 2009), and modelling social networks and travel (e.g., Arentze and Timmermans, 2008). In this way, the links between social exclusion, social networks, and social capital are starting to receive attention within the travel behaviour debate (Stanley and Vella-Brodrick, 2009). It also goes some way towards bridging the disciplinary divide that currently exists between transport studies and the social sciences, because most of

these studies have adopted the theories and methods that have been previously applied to other areas of social enquiry by sociologists.

Each of these different research perspectives has tended towards the utilisation of very different methodological approaches, with their own demonstrated particular implications in describing various aspects and nuances of the relationship between transport disadvantage and social exclusion. As critiques of these methodologies are well cited within the literature identified above, as well as elsewhere, it is not the aim of this chapter to revisit these debates. The next section does, however, review the strengths and weaknesses of the methodology that was applied in the Melbourne study within in light of some of the more fundamental philosophical divides which underpin these methodological debates.

IMPLICATIONS AND SCOPE OF THE METHODOLOGY

The stated aim of the Melbourne study methodology was to quantify and statistically test the strength of the association between transport disadvantage, social exclusion and wellbeing (Currie, 2010). It was the perception of the research team at that time that previous studies of transport and social exclusion were dominated by qualitative and descriptive approaches, and that what was needed was: “*robust and reliable* evidence on which to objectively review and assess the full range of public transport delivery in the context of social needs in Australian cities.” (ibid: 31).

Firstly, it is important to recognise the ongoing academic debates regarding the appropriateness and utility of quantitative versus qualitative methodologies for evaluating social phenomenon more generally and transport-related social equity issues in particular. This is partly derived from the conceptual and theoretical differences and described previously, as well as broader debates pertaining to this. There are scholars, therefore, who would fundamentally disagree with this assertion. Writing on the visual impacts of roads and traffic, for example, Wright and Curtis (2002: 145) assert that these are: “*less tangible aspects that cannot be expressed in quantitative terms*”. Scholarly work in this area emphasises the importance of focus groups, in-depth interviews and other qualitative approaches for gaining in-depth understandings of the actual lived experiences of transport poor populations, often

integrating visual and other stimulus materials to help guide participant discussion (e.g. Bayley et al., 2004).

Secondly, the Melbourne study relied principally on a bespoke dataset collected using face-to-face household surveys with sub-samples of residents participating in the Victoria Integrated Survey of Travel and Activity (VISTA) (Currie and Delbosc, 2011). Here again scholarly opinion is divided. On the one hand, scholars such as Forkenbrock et al. (2001) have noted the promising nature of neighbourhood surveys in the evaluation of the social effects of transport projects. Others view survey instruments as only being useful in identifying a limited range of social impacts, such as trip diversion and delay, and road safety (e.g. James et al., 2005). One of the problems the research team encountered in relying upon the household survey sub-sample was the over-representation of both older age and higher income groups and subsequent under-representation of respondents meeting the identified social exclusion criteria (Currie et al, 2010). The study team's concerns about this issue, in terms of skewing their modelled results, was so profound that a separate special survey was devised using 'location sampling' at specialist community centres and 'snowballing' techniques to enhance their sample (Delbosc and Currie, 2010). The team concluded that there are significant challenges for researchers and transport professionals in their household travel survey planning, if this method is to adequately capture the very different travel behaviours and accessibility needs of socially excluded population groups (ibid).

Thirdly, analysis of the survey data raised important concerns about the use of self-reported measures of transport disadvantage in the evaluation of transport-related social exclusion. The study demonstrated a poor relationship between self-reported transport disadvantage and lack of access to a private vehicle and overall reduced levels of mobility. This was because respondents with relatively high incomes, good car access and driving licenses, and above average levels of realised travel often reported high levels of self-reported transport problems and low subjective well-being (SWB) in relation to their travel experiences (Currie and Delbosc, 2010). Low levels of self-reported transport disadvantage were also not always associated with good access to transport or average levels of mobility. Thus in the Australian context, this finding suggests that simple proxy measures of mobility are not a reliable measure of transport-related social exclusion. Importantly, the study reveals the high values that

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

some economically active sectors of the population place on their time and their perception of ‘time-wasted’ whilst travelling, particularly working women with small children. Similar findings have been highlighted by other scholars in this area (e.g. Schwanen, 2011).

One of the particular strengths of the Melbourne study is that it models differences in the travel outcomes of ‘matched samples’ of more and less affluent Australians sampled, using a set of predefined social exclusion criteria which have been already widely accepted within the social policy literatures. This approach is advantageous in that: it reduces any ambiguity in defining who qualifies as excluded (and who does not); and its results can also be easily communicated to social policy makers using their own specified criteria. The study has also aimed to capture the spatial context of transport-related social exclusion by modelling the behaviour of two samples across three different geographical locations (inner urban, outer suburban and regional Melbourne) (Currie and Delbosc, 2010b), thus clearly isolating transport disadvantage and access to services as distinct from other aspects of social disadvantage, such as income, unemployment and low educational attainment; although it is recognised that there may be a cumulative effect in terms of the social exclusion of individuals in practice.

These are all important considerations in terms of translating their research into policy and practice, which is the subject of this next and final section of the chapter.

RELEVANCE FOR POLICY INTO PRACTICE

Stanley and Vella-Brodick (2009) identify that until quite recently social policy in transport has tended to limit itself to concerns about safety, disability access and meeting the needs of older travellers. The advent of social exclusion policy in the UK (Social Exclusion Unit, 1998) has served to enliven debates concerning the role of transport in society, more generally. In particular, it has also helped to broaden the policy focus to consider the activity needs and physical and cognitive abilities of a wider set of socially disadvantaged groups. Finally, it has placed greater emphasis on the social consequences of lack of transport in terms of the inability of affected groups to access to important opportunities, and goods and services, due to inbuilt operational shortfalls within the transport system. As identified earlier in the chapter, research on

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

transport and social exclusion has already made a number of important contributions to transport policy and practice in the UK, as well as having some influence on policy-decision-making in other countries (Lucas and Currie, 2011; Lucas, forthcoming).

Nevertheless, there remain some significant questions about how policymakers and local delivery agencies inside and outside of the transport sector might collaborate more successfully to address the various dimensions of transport and social exclusion in a comprehensive and holistic manner, as well as what the most appropriate metrics and evaluative frameworks might be when evaluating the policy measures they implement. The Melbourne study has opened up this debate still further to consider the relationship between transport-related exclusion and subjective well-being and the social psychological links of well-being and self-reported transport disadvantage (Delbosc and Currie, 2011), as well as attempting to capture the role of public transport in promoting social capital within neighbourhoods (Currie and Stanley, 2008; Stanley et al., 2010). These are both important departures for the public policy realm because they begin to question the conventional wisdom that transport predominantly serves an economic function within society and its effectiveness and efficiency should therefore be judged on the basis of its economic impacts.

Although this economic function may remain true in the case of major new strategic transport infrastructure projects, it is rarely the anticipated outcome of locally targeted transport improvement projects and yet these are still predominantly being assessed against economic criteria. As Preston and Rajé (2007) observe, the emphasis within the policy literature has gradually shifted away from social exclusion to inclusion, as in the Department for Transport's (2007) recent strategic objectives. The view that disadvantaged people can be enabled to connect with jobs, local services, goods and social networks through transport, for example, is to be achieved through improvements to 'accessibility, availability, affordability and acceptability' (Department of Transport, 2007).

Stanley (2010) adds further credence to the argument for the need to move away from assessment of economic impacts and to develop new approaches to the appraisal and evaluation of socially targeted transport projects. Based on survey respondents' stated willingness to pay and his modelling of 'switched variables' of Risk of Social

Exclusion and Satisfaction of Life, Stanley computes the additional 'social value' of a new trip because of improved public transport services to be c. AU\$20 or approximately £13 or US\$21. Interestingly, and in terms of the policy impact of his research, the method was used to convince the Victoria Government to implement new bus services in the Melbourne Outer Area with significant uptake in bus patronage amongst travellers who 'rarely' or 'never' had access to a car (as much as 64 per cent of full-fare paying passengers and 74 per cent of concessionary fare paying passengers in one case study) (Loader and Stanley, 2009). Arguably, it is largely because the transport sector has been able to measure and communicate the true value of subsidised transport projects in social policy terms (i.e. improved participation in activities, reduced isolation, increased well-being, etc.) that it has been so overlooked within the internal decision processes of these other sectors thus far.

FURTHER RESEARCH OPPORTUNITIES

Notably absent from the Melbourne study is the consideration of the transport needs of Australia's most marginalised and disadvantaged population group, Aboriginal Australians. The vast majority of Australia's Indigenous population live in fringe urban areas or in outer regional and remote areas where public and community transport services are generally very poor (New South Wales Transport Network, 2006). Although transport studies of this kind are few and far between (e.g. Altman and Hinkson, 2007; Pollack, 2001; Young, 2001), it is clear that lack of transport is a critical issue for this community and often serves to exacerbate other social disadvantages within it (Currie and Senbergs, 2007).

Clearly this is not an easy or inexpensive line of enquiry to pursue and one which would have been virtually impossible to deliver under the auspices of the Melbourne study, in light of the need for specially targeted data collection methods, different sampling and recruitment approaches, and a 'fit-for-purpose' survey design. Furthermore, the issue of transport and Aboriginal social exclusion is not one which should be 'piggy-backed' onto another study, but rather merits its own bespoke programme of research. Nevertheless, it represents a serious gap in the current

knowledge-base regarding transport-related social exclusion in the Australian context, which the Australian Research Council should seriously strive to address in future.

A second area for further research enquiry, and one which is perhaps more within the grasp of the Melbourne study team, is to undertake some complimentary GIS-based public transport accessibility analysis of the survey sample. As this chapter has already identified, accessibility measures have come to be widely accepted as integral to the transport and social exclusion toolkit (e.g. DHC and University of Westminster, 2004; Hurni, 2006; Dodson et al, 2007; Dodson and Sipe, 2007; Jones and Wixey, 2008; Mackett et al, 2008). The reason for this has been twofold: i) the potential of the method for identifying spatial mismatches between people, places and activities; and ii) rapid advancement in both GIS technologies and software and the availability of geo-coded transport network and land use datasets in recent years (Halden, forthcoming). Accessibility mapping is an important further step if the study is to fully inform future transport planning in the State of Victoria. Clearly, providing low income households with adequate public transit connectivity to employment, education, health and other cultural and leisure activities is a pressing issue for policymakers in the State of Victoria (Lucas and Currie, 2011), as well as more widely across the rest of Australia (Currie et al, 2007).

Finally, the study still has some way to go in terms of articulating its qualitative understanding of the travel and non-travel experiences of different groups of socially excluded Australian citizens. Given the considerable differences observed in the physical geographies, transport access (both private and public), and lifestyles of survey participants, these are likely to be further distinct from those of their European or American counterparts. Indeed, Johnson et al. (2011) raise the issue of young people's lack of access to arts and cultural facilities as contributing to their social exclusion and reduced social capital, particularly for those living in households without access to a car. This is an issue that has not previously been raised within the literatures on transport and social exclusion and has important implications for theories of socialisation and social learning. It is likely that many further opportunities and topics of interest for exploitation of this rich data source will continue to arise for many years to come. It is only to be hoped that the enthusiasm for exploring social issues in transport demonstrated thus far by academics and policymakers continues to abound.

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

CONCLUSIONS

As illustrated in this chapter, there remains considerable ambiguity surrounding what constitutes appropriate areas of enquiry for the study of social exclusion within the transport sector and this has generated a range of conceptual issues and misunderstandings about which social groups, places and activities to focus on. This suggests the need to establish a 'lexicon of definitions' to ensure a greater degree of clarity and consistency within and between the academic and policy literature.

It is clear that a similar set of issues has arisen regarding appropriate ways of measuring and evaluating social equity impacts of transport decision-making. These include such considerations as: the utility of different qualitative and quantitative methods; analysis at the macro or individual level; and overlap with other approaches to assessing economic and health impacts associated with transport. Finally, new forms of equality legislation, such as those that have emerged in the UK under the Labour Government and apply to all public bodies, including those that deliver transport services and devise transport policy, are required. The Melbourne study has certainly helped to move these debates forward, but scholars still have some way to go in terms of integrating hitherto separate perspectives of transport-related social exclusion into an overarching and holistic conceptual framework, proposing and testing indicators to capture the complex, multi-dimensional and relational nature of the phenomenon, making comparison of the nature, extent and severity of transport-related exclusion across different geographical and national contexts and in communicating the importance of the phenomenon for other areas of social policy delivery.

REFERENCES

Altman, J. and Hinkson, M. (2007) 'Mobility and Modernity in Arnhem Land: The Social Universe of Kuninjku Trucks' *Journal of Material Culture* 12:2: 181-203.

Arentze T, Timmermans H, 2008, "Social networks, social interactions, and activity-travel behavior: a framework for microsimulation" *Environment and Planning B: Planning and Design* 35(6) 1012 – 1027

Axhausen, K. (2005) 'Social Networks and Travel: Some Hypotheses' in Donaghy, K., Poppelreuter, S. and Rudinger G. (eds.) (2005) *Social Dimensions of Sustainable Transport: Transatlantic Perspectives* Aldershot, United Kingdom: Ashgate

Bayley, M., Curtis, B., Lupton, K. & Wright, C. (2004) Vehicle aesthetics and their impact on the pedestrian environment. *Transportation Research Part D: Transport and Environment*, 9(6), pp. 437-450.

Beckmann, M. J., Golob, T. F. and Zahavi, Y., (1983a) Travel probability fields and urban spatial structure: Theory. *Environment and Planning A* 15:5: 593-606

Beckmann, M. J., Golob, T. F. and Zahavi, Y., (1983b) Travel probability fields and urban spatial structure: Empirical tests. *Environment and Planning A* 15:6: 727-738

Bristow, A. Enoch, M.P., Zhang, L., Greensmith, C., James, N. And Potter, S. (2008) 'Kickstarting growth in bus patronage: Targeting support at the margins' *Journal of Transport Geography* 16: 408-418

Bröcker, J., Korzhenevych, A., and Schürmann, C. (2010) Assessing spatial equity and efficiency impacts of transport infrastructure projects, *Transportation Research Part B* 44, 795–811.

Buliung, R.N., and Kanaroglou, P.S. (2006) Urban Form and Household Activity-Travel Behavior. *Growth and Change* 37, 172-199.

Byrne, D. (2005) *Social exclusion Berkshire, England*: Open University Press.

Carrasco, J.A. and Miller, E.J. (forthcoming) 'Network capital, social networks, and travel: An empirical illustration from Concepción, Chile' *Environment and Planning A*

Carrasco, J.A. Hogan, B. Wellman, B. and Miller, E.J. (2008) 'Agency in Social activity Interactions: The Role of Social Networks in Time and Space' Dutch Royal Geographical Society KNAG

Casas, I., 2007. Social Exclusion and the Disabled: An Accessibility Approach. *The Professional Geographer*, 59(4), pp. 463–477.

Casas, I., Horner, M. W., and Weber, J. (2009) 'A comparison of three methods for identifying transport-based exclusion: A case study of children's access to urban opportunities in Erie and Niagara Counties, New York' *International Journal of Sustainable Transportation* 3: 227-245

Cass, N., Shove, E. and Urry, J. (2005) 'Social exclusion, mobility and access' *Sociological Review* (2005) 539-555

Cellobada, A., (2009) 'Mobility and labour market exclusion in the Barcelona Metropolitan Region' *Journal of Transport Geography* 17: 226-233

Church, A., Frost, M. and Sullivan, K. (2000) 'Transport and social Exclusion in London' *Transport Policy* 7: 195-205

Church, R. L. and Marston, J. R. (2003). Measuring accessibility for people with a disability. *Geographical Analysis*, 35(1), pp. 83–96.

Currie, G. (2010) 'Quantifying spatial gaps in public transport supply based on social needs' *Journal of Transport Geography* 18: 1: 31-41

Currie, G. and Delbosc, A. (2010) 'Modelling the social and psychological impacts of transport disadvantage' *Transportation* 37: 953-966

Currie, G. and Delbosc, A. (2010b) 'The spatial context of transport disadvantage, social exclusion and well-being' *Proceeding of the World Conference on Transport (WCTR) Lisbon, Portugal 12th-15th July, 2010*

Currie, G. and Senbergs, Z. (2007) 'Indigenous Communities: Transport Disadvantage and Aboriginal Communities' in Currie, G., Stanley, J. and Stanley, J. (eds.) *No Way to Go Melbourne: Monash University*

Currie, G. and Stanley, J. (2008) 'Investigating the Links between Social Capital and Public Transport' *Transport Reviews* 28: 4: 529-547

Currie, G., Stanley, J. and Stanley, J. (2007) *No Way To Go: Transport and social disadvantage in Australian Communities* Melbourne, Australia: Monash University ePress

Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R. and Stanley, J. (2010) 'Investigating Links Between Transport Disadvantage, Social Exclusion And Well-Being In Melbourne – An Update On Results' *Research in Transport Economics* 29: 287-295

Delbosc, A., and Currie, G. (2010) Designing inclusive transport surveys: Sampling disadvantaged people, *Australasian Transport Research Forum 2010 Proceedings* 29 September – 1 October 2010, Canberra, Australia. Publication website: <http://www.patrec.org/atrf.aspx>

Delbosc, A., & Currie, G. (2011) 'Transport problems that matter - social and psychological links to transport disadvantage' *Journal of Transport Geography*, 19:1: 170-178

Department for Transport (2006) *Full Guidance on Accessibility Planning* <http://www.dft.gov.uk/pgr/regional/ltp/accessibility/guidance/gap/nicalguidanceonaccessibi3641.pdf> Last accessed 30.11.09

Department for Transport (Dft), 2007. An introduction to social inclusion. [online] Available at: <http://www.dft.gov.uk/pgr/inclusion/siintro> [Accessed 2 May 2011].

DHC and the University of Westminster (2004) *Developing and piloting approached to Accessibility Planning in eight case study authorities - Final report to Department for Transport* <http://www.dft.gov.uk/pgr/regional/ltp/accessibility/developing/research/ssibilityplanningdevelop3614.pdf> Last accessed 30.11.09

Dijst, M. and Kwan, M.P. (2005) 'Accessibility and Quality of Life: Time Geographic Perspectives' in Donaghy, K., Poppelreuter, S. and Rudinger G. (eds.) (2005) *Social Dimensions of Sustainable Transport: Transatlantic Perspectives* Aldershot, United Kingdom: Ashgate

Dodson, J., Gleeson, B., Evans, R. and Sipe, N. (2007) 'Investigating the social dimensions of transport disadvantage II: From concepts to methods through and empirical case study' *Urban Policy and Research* 25:1: 63-89

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Dodson, J. and Sipe, N. (2007) 'Oil vulnerability in the Australian city: assessing socio-economic risk from higher fuel prices' *Urban Studies* 44: 37-62

Doi, K., Kii, M. and Nakanishi, H. (2008) 'An integrated evaluation method of accessibility, quality of life, and social interaction' *Environment and Planning B: Planning and Design*, 35:6: 1098-116.

Dugundji, E.R. and J.L. Walker (2005) Discrete choice with social and spatial network interdependencies: an empirical example using mixed generalized extreme value models with field and panel effects. *Transportation Research Record*, 1921, 70-78.

Farber, S. and Páez, A. (2011) 'Mobility Without Accessibility: The Case of Car Use and Discretionary Activities' in Lucas, K., Blumenberg, E. And Weinberger, R. *Auto Motive: Understanding Car Use Behaviours* Bingley: Emerald Publishing Limited

Farrington, J. (2007) 'The new narrative of accessibility: its potential contribution to discourses in (transport geography)' *Journal of Transport Geography* 15: 319-330

Forkenbrock, D. J., Benschhoff, S. and Weisbrod, G. E. (2001) *Assessing the Social and Economic Effects of Transportation Projects* Iowa City, IA/Boston, MA: University of Iowa/Economic Development Research Group.

Grieco, M. (2006) 'Accessibility, Mobility and Connectivity: The Changing Frontiers of Everyday Routine' *European Spatial Research and Policy (Special Issue)* 78:6: 1360-80

Geurs, Karst T., Boon, Wouter and Van Wee, Bert (2009) 'Social Impacts of Transport: Literature Review and the State of the Practice of Transport Appraisal in the Netherlands and the United Kingdom' *Transport Reviews*, 29: 1, 69 - 90

Halden, D. (forthcoming) 'Accessibility Analysis and Planning in the UK – Past, Present and Possible Future Directions' in Geurs, K. (ed.) *Accessibility Analysis and Planning (Working Title)* London: Edward Elgar

Hamilton, K., Jenkins, L. (2000) A gender audit for public transport: A new policy tool in the tackling of social exclusion, *Urban Studies* 37:10: 1793-1800

Hanson, S. (2010) 'Gender and mobility: new approaches for informing sustainability' *Gender, Place and Culture* 17:1: 5-23.

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Hartell, A. (2008) 'Is inadequate transportation a barrier to community involvement?: Evidence from the social capital benchmark survey' *Transportation Research Record* 2067; 11-16.

Hills, J., Le Grand J. and Piachaud D. (eds.) (2002) *Understanding Social Exclusion* Oxford: Oxford University Press

Hine, J. and Mitchell, F. (2003) *Transport Disadvantage and Social Exclusion: Exclusionary Mechanisms in Transport in Urban Scotland* Aldershot: Ashgate

Hodgson, F. and Turner, J. (2003) 'Participation not consumption: the need for new participatory practices to address transport and social exclusion' *Transport Policy* 10: 265-272

Hurni, A. (2006) *Transport and Social Exclusion in Western Sydney* University of Western Sydney and Western Sydney Community Forum, Australia

James, E., Millington, A. and Tomlinson, P. (2005) *Understanding Community Severance I: Views of Practitioners and Communities* (Wokingham:TRL).

Jennrich, R. I. and Turner, F. B. (1969) 'Measurement of non-circular home range' *Journal of Theoretical Biology* 22: 2: 227-237

Johnson, V., Currie, G., and Stanley, J. (2011) 'Exploring transport to arts and cultural activities as a facilitator of social inclusion' *Transport Policy* 18: 1: 68-75

Jones, P. And Wixey, S. (2008) *Measuring accessibility as experienced by different social groups: final report*
http://home.wmin.ac.uk/transport/download/SAMP_WP8_Final_Summary_Report.pdf
Last accessed 25.10.10

Kenyon, K., Lyons G. and Rafferty, J. (2003) 'Transport and social exclusion: investigating the possibility of promoting social exclusion through virtual mobility' *Journal of Transport Geography* 10: 207-219

Langford, M. and Higgs, G. (2010) *Accessibility and public service provision: Evaluating the impacts of the Post Office Network Change Programme in the UK*, *Transactions of the Institute of British Geographers*, 35(4), 585-601.

Leck, E., Bekhor, S. and Gat, D. (2008) 'Equity impacts of transportation improvements on core and peripheral cities' *Journal of Transport and Land Use* 2:1: 153–182.

Lee, J. Y. and Kwan, M.P. (2011) 'Visualisation of socio-spatial isolation based on human activity patterns and social networks in space-time' *Tijdschrift voor economische en sociale geografie*, 102: no. doi: 10.1111/j.1467-9663.2010.00649.x

Levinson, D. (2009) 'Equity effects of road pricing' *Transport Reviews* 30:1: 33–57

Loader, C. and Stanley, J. (2009) 'Growing bus patronage and addressing transport disadvantage – The Melbourne experience' *Transport Policy Special Issue International Perspectives on Transport and Social Exclusion* 16: 3: 90-96

Lucas, K. (2004) 'Locating transport as a social policy problem' in Lucas, K. (ed.) *Running on Empty: Transport, social exclusion and environmental justice* Bristol: The Policy Press

Lucas, K. (forthcoming) 'Making the connections between transport disadvantage and the social exclusion of low income populations in the Tshwane Region of South Africa' *Journal of Transport Geography* [accepted for publication 22.02.11]

Lucas, K., Grosvenor T. and Simpson R. (2001) *Transport, the Environment and Social Exclusion* York: Joseph Rowntree Foundation/ York Publishing Ltd. Lucas, K. (2004) *Running on Empty: transport social exclusion and environmental justice* Bristol, United Kingdom: Policy Press

Lucas, K., Tyler S. and Christodolou G. (2008) 'The value of new transport in deprived areas: Who benefits, how and why?' Joseph Rowntree Foundation <http://www.jrf.org.uk/sites/files/jrf/2228-transport-regeneration-deprivation.pdf>

Lucas, K. and Currie, G. (2011) 'Developing socially inclusive transportation policy: transferring the United Kingdom policy approach to the State of Victoria?' *Transportation* doi:10.1007/s11116-011-9324-2

Mackett, R., Achuthan, K. and Titheridge, H. (2008) 'AMELIA: A tool to make transport policies more socially inclusive' *Transport Policy* 15: 372-378

Marlier, E., Atkinson, T., Cantillon B. and Nolan, B. (2007) *The EU and Social Exclusion: Facing the Challenges* Bristol: Policy Press

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Martens, K. (2006) 'Basing transport planning on principles of social justice' *Berkeley Planning Journal* 19: 1–17.

McCray, T., and Brais, N. (2007) 'Exploring the Role of Transportation in Fostering Social Exclusion: The Use of GIS to support Qualitative Data' *Networks and Spatial Economics* 7: 397-412.

Neutens, T., Schwanen, T., and Witlox, F. (2011) 'The Prism of Everyday Life: Towards a New Research Agenda for Time Geography' *Transport Reviews* 31:1: 25-47.

New South Wales Aboriginal Transport Network (2006) 'Transport disadvantage in Aboriginal communities' in *Communities* in Currie, G., Stanley, J. and Stanley, J. (eds.) *No Way to Go Melbourne*: Monash University

Ohnmacht, T., Maksim, H. and Bergman, M.M. (2009) *Mobilities and Inequalities* Surrey, United Kingdom: Ashgate.

Páez, A., Mercado, R.G., Farber, S., Morency, C., Roorda, M. (2009) *Mobility and Social Exclusion in Canadian Communities: An Empirical Investigation of Opportunity Access and Deprivation from the Perspective of Vulnerable Groups* Toronto, Canada: Policy Research Directorate Strategic Policy and Research

Páez, A., Mercado, R.G., Farber, S., Morency, C., & and Roorda, M. (2010) 'Relative Accessibility Deprivation Indicators for Urban Settings: Definitions and Application to Food Deserts in Montreal' *Urban Studies*, 47:7: 1415-1438.

Phillipson, C., Allan, G., and Morgan, D. (2004) *Social Networks and Social Exclusion: Sociological and Policy Perspectives* Aldershot: Ashgate.

Pollack, T. (2001) 'Transport disadvantage within Aboriginal communities in an urban environment' *Urban Policy and Research* 19:3: 335-346

Preston J., and Rajé, F (2007) 'Accessibility, mobility and transport-related social exclusion' *Journal of Transport Geography* 15: 3: 151-160

Priya Uteng, T. (2009) 'Gender, ethnicity and constrained mobility: insights into the resultant exclusion' *Environment and Planning A* 41: 1055-1071

Rajé, F., (2004) *Transport Demand Management and Social Inclusion: The Need for Ethnic Perspectives* Aldershot: Ashgate

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Rose, E., Whitten, K. And McCreanor T. (2009) 'Transport Related Social Exclusion in New Zealand: Evidence and Challenges' *New Zealand Journal of Social Sciences Online* <http://www.royalsociety.org.nz/site/publish/journals/kotuitui/2009/028.aspx>

Schonfelder, S. and Axhausen, K.W. (2003) 'Activity spaces: measures of social exclusion?' *Transport Policy* 10: 273-286

Schwanen, T., (2008) 'Managing uncertain arrival times through sociomaterial associations' *Environment and Planning B: Planning and Design* 35: 6: 997-1011

Schwanen, T. (2011) 'Car Use and Gender: The case of Dual-Earner Families in Utrecht, The Netherlands' in Lucas, K., Blumenberg, E. And Weinberger, R. *Auto Motive: Understanding Car Use Behaviours* Bingley: Emerald Publishing Limited

Schwanen, T., and De Jong, T., (2008) 'Exploring the juggling of responsibilities with space-time accessibility analysis' *Urban Geography*, 29:6: 556-580

Schwanen, T., Kwan, M.-P., and Ren, F. (2008) 'How fixed is fixed? Gendered rigidity of space-time constraints and geographies of everyday activities' *Geoforum*, 39:6: 2109-2121.

Scott, D.M., & Horner, M.W. (2008) 'Examining the role of urban form in shaping people's accessibility to opportunities: An exploratory spatial data analysis' *Journal of Transport and Land Use*, 1:2: 89-119.

Sinha, K. C. and Labi, S. (2007) *Social and Cultural Impacts*, in *Transportation Decision Making: Principles of Project Evaluation and Programming*, Hoboken, NJ, USA: John Wiley & Sons, Inc.,

Social Exclusion Unit (1998) *Bringing Britain Together: A national strategy for neighbourhood renewal* London: Social Exclusion Unit.

Social Exclusion Unit (2003) *Making the Connections: Final report on Transport and Social Exclusion* London: Office of the Deputy Prime Minister

Stanley, J. (2010) 'The Social Value of Transport' *Proceeding of the World Conference on Transport (WCTR)* Lisbon, Portugal 12th-15th July, 2010

Stanley, J. and Vella-Broderick, D. (2009) 'The usefulness of social exclusion to inform social policy in transport' *Transport Policy Special Issue International Perspectives on Transport and Social Exclusion* 16: 3: 90-96

This article is © Emerald Group Publishing and permission has been granted for this version to appear here <http://eprints.whiterose.ac.uk/79354> Emerald does not grant permission for this article to be further copied/distributed or hosted elsewhere without the express permission from Emerald Group Publishing Limited.

Stanley, J., Stanley, J., Vella-Brodick, D. and Currie, G. (2010) 'The place of transport in facilitating social inclusion via the mediating influence of social capital' *Research in Transportation Economics* 29: 280-286

Thomopoulos, N., Grant-Muller, S., and Tight, M.R. (2009) 'Incorporating equity considerations in transport infrastructure evaluation: Current practice and a proposed methodology' *Evaluation and Program Planning* 32: 351–359

TRaC (2000) *Social Exclusion and the Provision of Public Transport London*: Department of Environment Transport and the Regions.

Urry, J. (2002) 'Mobility and Proximity' *Sociology* 36: 255-274.

Urry, J. (2007) *Mobilities* Cambridge, United Kingdom: Polity Press

World Bank (2006) *Social Analysis in Transport Projects: Guidelines for Incorporating Social Dimensions into Bank-Supported Project*. Washington: World Bank.

Wright, C., and Curtis, B. (2002) 'Aesthetics and the urban road environment' *Proceedings of the Institution of Civil Engineers: Municipal Engineer*, 151:2: 145-150.

Young, D. (2001) 'The life and death of cars: private vehicles on the Pitjanjatjara lands, South Australia' in Miller, D. (ed.) *Car Cultures* Oxford: Berg Publishers

Ziegler, F., & Schwanen, T. (2011) 'I like to go out to be energised by different people': An exploratory analysis of mobility and wellbeing in later life' *Ageing and Society*, 31:5: 758-781.