12TH WORLD CONFERENCE ON TRANSPORT RESEARCH

LISBON 11-15 JULY 2010

THE PLACE, ROLE AND EXPERIENCE OF MOBILITY FOR PEOPLE AT HIGH RISK OF SOCIAL EXCLUSION

Janet Stanley

Monash Sustainability Institute, Monash University
janet.stanley@msi.monash.edu.au

John Stanley

Institute of Transport and Logistics Studies, Faculty of Economics and Business, University of Sydney, NSW 2006

ABSTRACT

INTRODUCTION

This paper reports on some findings from a major Australian study, *Investigating Transport Disadvantage, Social Exclusion and Wellbeing in Metropolitan, Regional and Rural Victoria*. Information has been collected from three samples totalling 1019 respondents, from metropolitan Melbourne, a regional location in Victoria and a special sample which particularly targeted people likely to be at risk of social exclusion.

The paper will report on the study findings about mobility in relation to those respondents who have the highest risk factors for social exclusion, particularly those who are aged, unemployed, have a low income, sole parent households and disadvantaged youth. An overview of the context and theoretical background for this research is given and the concepts defined, followed by a brief examination of the characteristics of those in this sample group who are commonly viewed as being at risk of social exclusion. The travel choices and mobility patterns of those who are at high risk of exclusion are explored, followed by a reflection as to whether this group shows similar travel patterns, community engagement and choices as those at a lower risk of social exclusion.

Overview of the ARC study

Travel information for the metropolitan and regional sample was gathered from a self-completed questionnaire, VATS (Victorian Integrated Survey of Travel and Activity 2009), from April 2007 through to June 2008[1]. People aged 15 years and over were then invited to opt in to an additional interview in their home, lasting just over an hour on average. The metropolitan (N=535) and regional surveys (N=146) did not

[1] VATS is a household survey of travel and activity. The survey runs continuously over a survey year and collects travel data for one day's travel per person in all randomly surveyed households. About 1% of households in Melbourne are covered by the survey.

encompass sufficient numbers of highly 'at risk' people, since they proved unlikely to participate in self-completed travel surveys (and hence could not opt in to the interview surveys) and their numbers are proportionately lower than included people in any given sample. The special survey targeted those likely to have the greatest risk of social exclusion, approaching them through welfare agencies and CentreLink offices[2]. As this sample did not arise from the VATS sample, a shorter travel questionnaire was also administered to these respondents, the interview taking place at the agency through which the people were accessed.

THEORETICAL BACKGROUND AND INFORMATION SOUGHT

More details on this study can be obtained from other articles (for example, Currie et al. 2009, Stanley et al, 2011). In brief, the study sought to understand the role of mobility in improving social inclusion and wellbeing. A feature of the study is the multi-disciplinary approach which was taken to bring further understanding to the value and role of transport. Hence information was sought on a very wide range of personal variables, including demographics, household location, social exclusion, social capital and community connectedness, subjective and psychological well-being, personality and mood, transport usage and mobility. As far as possible, the questions were structured to draw on existing social and psychological theory and methods of measurement, in order to build knowledge.

The ideological context for this work is based in social policy which seeks to maximise the quality of life for all citizens. This includes ideas about the need for a healthy society which offers equality of opportunity and justice, as well as maximising individual health and wellbeing (Manderson 2005). Thus, it is important to understand the role played by the provision of transport to the achievements of these outcomes.

Much of the work on social exclusion and transport follows work undertaken by the UK's Social Exclusion Unit (2003). An important focus in this work was on the need for accessibility to specific activities judged by the researchers to be important: education, employment, access to health and other services and to food shops, as well as to sporting, leisure and cultural activities. A study of the mobility issues of aged people in five European Countries reported on a wider range of issues than previous studies – including wellbeing and perceptions of control (Mollenkopf et al. 2005). An exploration of social exclusion and mobility was undertaken in a regional centre in Warrnambool, Australia (Stanley and Stanley, 2004, Stanley and Stanley, 2007). This study took a qualitative/ consultative approach, asking people about their travel needs in order to understand their patterns of mobility and facilitators and inhibitors. It led to the conclusion that the ability to be mobile is an essential component to inclusion but its role and place is both complex and much broader than previously thought.

This was confirmed in a small subsequent study which examined the use of new bus routes in an outer Melbourne suburb (Bell et al., 2006). It was found that the most common use of the new service was for the building of social networks and contacts between people – socialising leisure and getting 'out of the house'. Initial analysis from this present study has given further support to this important role of mobility

[2] Centrelink offices are a federal government agency which administers employment and welfare benefits and services.

(Stanley et al. under review, Vella-Brodrick and Stanley under review). In general, the greater the risk of social exclusion, the less a person travels. However, there are mediating factors which influence travel outcomes, such as personality attributes, mood, the extent and nature of social connections that people have with other individuals and the community. The personal value of travel also appears to be important in understanding how people get around the lack of availability of travel options. This paper offers further analysis on this issue using a larger and slightly different sample of people at high risk of social exclusion.

DEFINITIONS AND MEASUREMENT

Social Exclusion

The measurement of social exclusion drew on the four dimensions identified by the London School of Economics (Burchardt et. al., 2002). However, some modifications were made to their framework - their 'participation' dimension' was re-defined as social support and for this study, a measure of participation in activities was added and political engagement broadened. The definitions for a person's risk of social exclusion used in this study are as follows:

- Household income – less than a threshold of $500 gross per week.
- Employment status – not employed, in education or training, not looking after family nor undertaking voluntary activities
- Political activity – did not contribute to/participate in a government political party, campaign or action group to improve social /environmental conditions, or to a local community committee/group in the past 12 months.
- Social support – not able to get help if you need it from close or extended family, friends or neighbours.
- Participation – did not attend a library, sport (participant or spectator), hobby or arts event in the past month.

Each dimension is given equal weight. The London School of Economics approach treats each dimension separately, not seeking to combine them, noting that different cohorts may emerge on each dimension (Burkhardt et al., 2002). While this may be so, it is argued here that the more a person has these dimensions present, the greater their risk of social exclusion.

Social Capital

Social capital is commonly viewed as the development of reciprocity, social networks and trust between people (Putnam, 1995). For the purposes of this analysis, only networks were used as a measure of social capital. Two types of networks were measured: bonding and bridging networks (Stone, Gray and Hughes, 2003). Bonding networks exist between family, friends and neighbours and assist the process of 'getting by' on a daily basis. Bridging networks allow people to 'get ahead' by accessing resources and opportunities through contacts with work colleagues and people associated with wider groups, such as local government, schools and sporting clubs. The extent of contact was measured using a six point scale which ranged from 'never' to 'most days' for the four measures of bonding networks and two measures of bridging networks.

Community connectedness

Community strengthening occurs where a sense of neighbourhood develops and people become actively engaged in the community. They feel socially connected, may become volunteers or leaders, and a sense of community pride is established (Vinson, 2004). As with social capital, positive views about, and involvement in, the community increase individual capacities and opportunities. Community connectedness is measured by the following statement: 'I think my neighbourhood is a good place for me to live', the response to this being highly correlated to a wider range of other measured views about community used in the Sense of Community Scale (Chavis et al. 1987).

Wellbeing, Positive affect and Negative Affect

Wellbeing was measured through the Satisfaction with Life Scale and the Personal Wellbeing Scale. The Satisfaction with Life Scale measures a personal assessment of one's life through a five item measure of satisfaction, rated on a seven point scale (Diener et al 1985, reported in Vella-Brodrick and Stanley, under review). The Personal Wellbeing Scale required people to rate their satisfaction from 1 to 10 on 8 dimensions. Affect or mood is measured by a 20 item self-report scale (PANAS) which measures positive and negative affect to describe the way they feel, using a 5-point scale ranging from very slightly or not at all to extremely (Vella-Brodrick and Stanley, under review).

Locus of Control scale

Locus of Control scale (Rotter 1966), is a 29 item questionnaire which examines the extent to which individuals believe that they can control events that affect them. A high internal sense of control suggests that the person believes events result primarily from their own behaviour and actions. Those with a high external sense of control believe that powerful others, fate, or chance primarily determine events.

Travel

The ability to travel was measured by the number of activities undertaken by each participant in randomly selected day, with the exception of the highly disadvantaged sample which recorded the day prior to the interview. Hence, there are few records of Saturday for this group.

FINDINGS

Features of the socially excluded group

Table 1 shows that approximately one-third (34.8%) of the total sample (N = 1019) exhibited no social exclusion risk factors, a further one third (34%) had one risk factor and the remaining 31.2% had two or more risk factors.

Table 1: Extent of social exclusion in the combined sample (N=1019)

No. of risk dimensions	Frequency	Percent
0	355	34.8
1	346	34.0
2	179	17.6
3	104	10.2
4	33	3.2
5	2	.2
Total	1019	100.0

This paper particularly examines the findings from the 139 people with three or more risk factors for social exclusion. Table 2 shows the dimensions on which these people are at risk. The least common risk factor was participation.

Table 2: Dimensions on which the respondents with 3 or more risk factors are at risk (N=139)

SE Dimension	Number	Per cent
Income	115	83
Employment	98	71
Political engagement	82	59
Participation	50	36
Support	109	78

Of this highly at risk group, 45% were female, compared with 55% in the total sample (1% not recorded); thus males are slightly more at risk of social exclusion than females in the survey groups. The age distribution is shown in Table 3. Those with higher risks of social exclusion were less likely to be in the younger and older age groups than found in the total sample.

Table 3: Age distribution of those with three or more social exclusion risk dimensions

Age	3+ dimensions of SE (%) N=139)	Total Sample (%) N=1019)
15-17	5	15
18-39	42	28
40-64	41	38
65+	12	20
Total	100.0	100

The wellbeing of those with 3+ risks of social exclusion was considerably lower than for the sample as a whole and lower still than for the sub-group with no social exclusion risk factors, on both the Personal Wellbeing and Satisfaction with Life (Wellbeing) Scales (Table 4). For Satisfaction with Life Scale, the world average sits at 70% + or – 5% (Cummins 2001). The percentage score for the high risk group in this survey is well below this range, at 54%, suggesting those with three or more risks of social exclusion have low satisfaction.

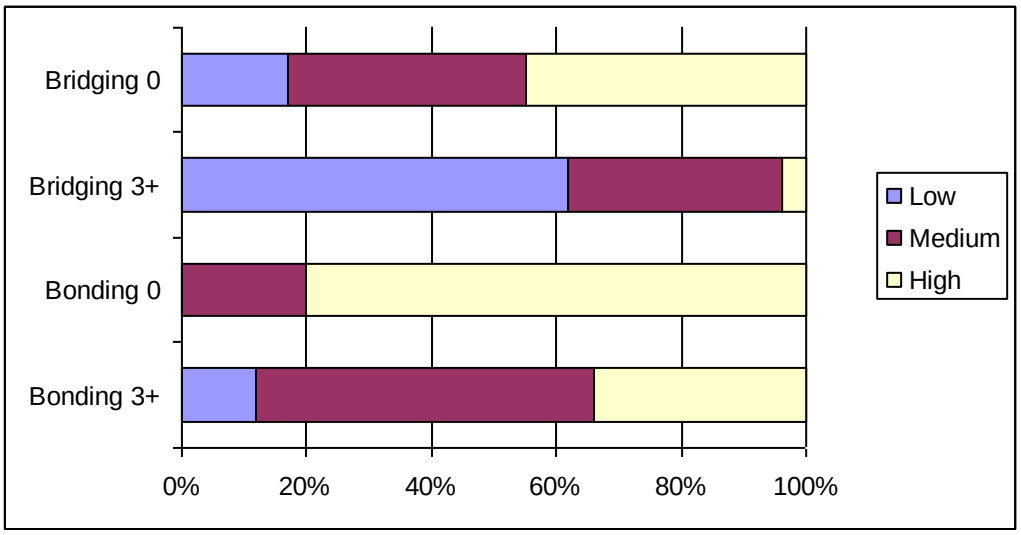
For positive and negative affect, the scale ranged from 1 to 5. Those with higher levels of risk of SE had slightly lower positive affect and a much greater level of negative affect. This again suggests that people with a high risk of social exclusion have a lower quality of life.

Table 4: Wellbeing measures for groups with three varying levels of social exclusion

Wellbeing measure	**3+ SE (N=139)**	**Total sample (N=1019)**	**No risks SE (N=355)**
Personal Wellbeing Scale (range 1-10)	5.5	7.1	7.7
Satisfaction with Life Scale (range 1-7)	3.8	4.9	5.4
Positive Affect (range 1-5)	3.3	3.5	3.7
Negative Affect (range 1-5)	4.8	1.8	1.7

Figure 1 reveals that those with no risks of social exclusion clearly have more active bonding and bridging social networks.

Figure 1: Use of social networks by those with 3+ social exclusion risk factors and no risk factors for the extent of bridging and bonding networks.



In terms of the measure of community, the average attachment to the community was also higher for those with no social exclusion risk factors than for those with 3+ dimensions of risk of social exclusion (6 versus 4.9).

Mobility

The average number of trips made each day for the sample as a whole was 3.9. This diminishes by about 0.2 trips per unit increase in the number of social exclusion risk factors (Stanley, under review). The trip rates show variability for different groups of people. For example, all of those aged 15 to 17 years who have 3+ risks of social exclusion undertook a trip on the sample day, while a substantial 40% of those in the 65 and over age group took no trips (this is based on small numbers of respondents). Similarly, the number of trips per day in this 3+ subset diminishes with age.

Those with 3+ dimensions are also considerably less likely to own a car, and have less number of cars in the household (Table 5). This difference is much larger than would be attributable to the slightly fewer adults in households with 3+ risks of social exclusion compared with the full data set (1.6 versus 2). Related to their low car ownership, those with 3+ risks of social exclusion are much more likely to use public transport more than once a week than those with no social exclusion risks (63% versus 39%). This is despite the fact that, the greater the risks of social exclusion, the fewer the trips a person makes.

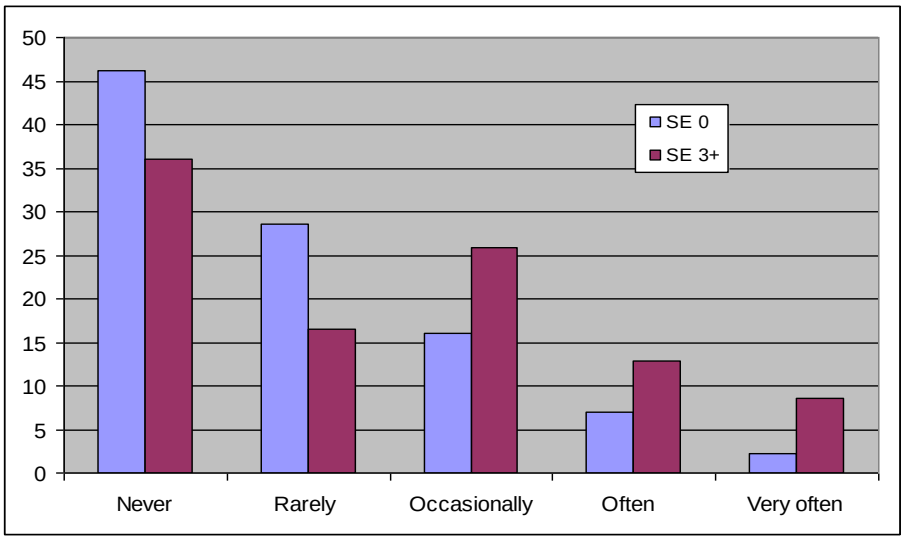
Table 5: Car ownership

No. of cars in house-hold	No SE dimensions %	Full data set %	3+ SE dimensions %
0	2	13	39
1	28	37	44
2	43	31	12
3+	27	19	5

Findings from the complete data set of the Victorian Integrated Survey of Travel and Activity 2007 offers an analysis of distance travelled according to income. The findings show a very strong trend that people travel a greater distance the higher their income. This ranged from 21 kilometres per person daily for those on $250 per week or less, to 46 kilometres daily for those on $2,000 plus per week.

Figure 2 compares the percentage of people who say they have difficulty accessing activities due to transport problems, comparing those with 3+ social exclusion risk dimensions and those with no social exclusion risk dimensions. It can be seen that those with the greatest risk of social exclusion report the greatest difficulties in accessing activities.

Figure 2: Difficulty accessing activities due to transport problems



Respondents were asked to rate their ease or difficulties with travel in 19 categories, on a five point scale where one was very difficult and five very easy. On average, those with 3+ risks of social exclusion had more travel difficulties than those with no social exclusion dimensions in 18 of the 19 categories. The ability to make transport

connections was the exception. Those with 3+ risks of social exclusion found the most difficulties (in order from most difficult) in relation to the lack of availability of buses, trams and trains at night, having to rely on others for transport and the lack of availability of buses, trams and trains at the weekend. The greatest variation in rating between those with 3+ and no risks of social exclusion rated to the cost of transport.

Twenty-five per cent of the respondents with 3+ dimensions of risk of social exclusion who answered the question (N=119, 20 unknown), said they can't do some activities because of transport problems. Of these, 35 respondents nominated the type of activity, as shown in Table 6. The most frequent activities nominated were enjoyment and getting out and about and sporting activities.

Table 6: Activities unable to be undertaken by a group of those with 3+ dimensions of SE

Activity	**Frequency N=35**
Enjoyment/Getting out and about	15
Sporting/leisure	14
Visiting friends and relatives	9
Interviews for jobs	7
Shops	3
Personal business (banking/medical)	3
Accompanying a child or elderly person	2
Attend school/university/TAFE	2
Anything long distance such as going to the country; going out to nature parks; family events such as birthdays; church and school accreditations for currency	Each one person

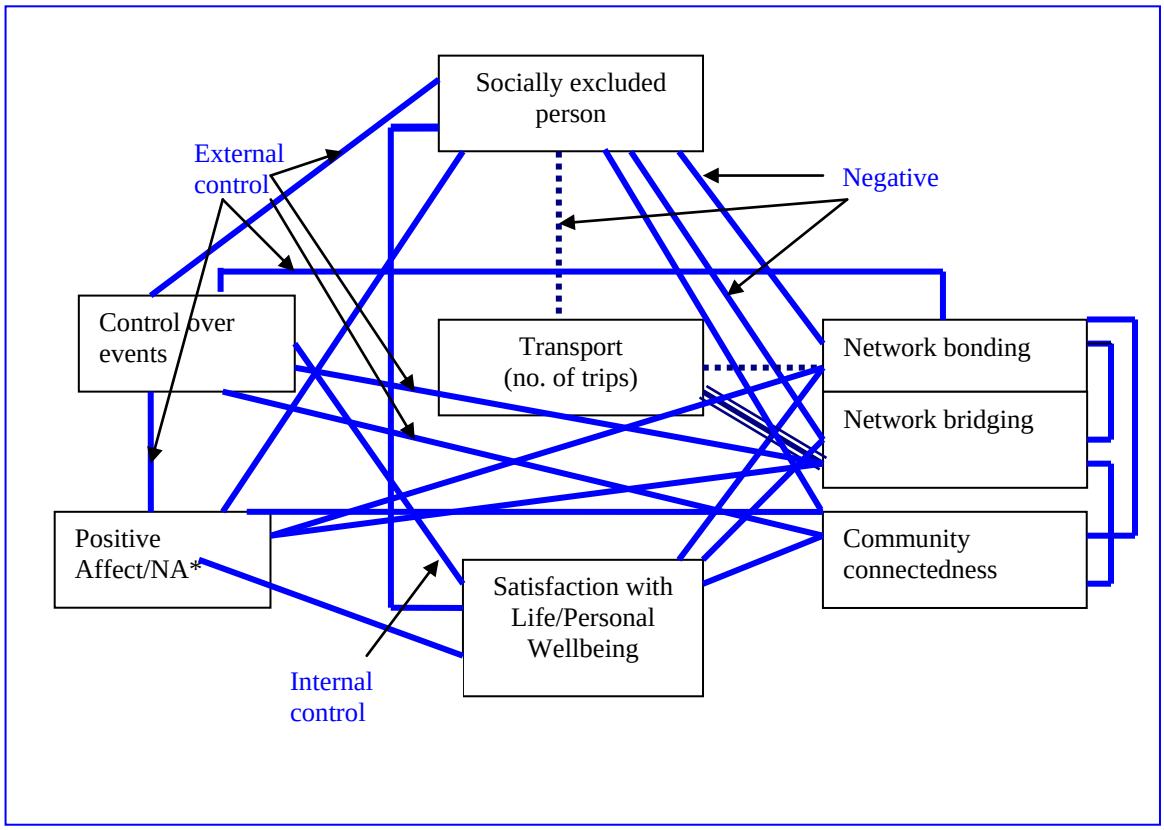
Associations between social exclusion, travel and well-being

Figure 3 shows the association between a number of factors which impact on personal experience. The model is based on one originally developed in Stanley and Stanley (2007) to assist in understanding the value of mobility to people at risk of social exclusion. The model has been broadened to include more variables than was examined in the original study as well as to reflect subsequent analysis using the data reported in this paper (Vella-Brodrick and Stanley under review, Stanley et al. under review).

The expanded model was drawn from Bronfenbrenner's ecological model, where a person is in the centre of concentric systems of progressively more distant relationships (1979). This could also be viewed as bonding networks and bridging networks. The variables on the left of the diagram refer to personal conditions, excluding personality variables and health. The variables on the right refer to the person's interaction with their social environment. Summary descriptions of the state of the person exist in measures of the person's position in relation to risk of social exclusion and wellbeing.

A correlation coefficient was used to examine the relationships between these respective variables. Figure 3 shows the significant statistical associations found in the urban study, the solid line showing a significant association where ($p<0.01$) and a doted line ($p<0.05$). The association with trips is shown by a multiple line for ease of identification. It should be noted that to remove unnecessary complexity from the figure, the significant relationships with the two measures of wellbeing are shown jointly, since they are the same ($p<0.01$). Similarly, the trends were the same for positive and negative affect, only where one was positive, the other was negative.

Figure 3: Relationships between variables



Note:* the negative affect relationships are the same with reversed signage.

The findings suggest that those who have the greatest risk of social exclusion have low levels of bonding and bridging networks and are less connected to the community. They have lower positive affect (and higher negative affect) and a belief that they have less control over events. Their wellbeing is rated as lower than typical. Thus, it would seem that if we are concerned about an individual's wellbeing, it is important to raise the levels of these personal and social interaction variables.

When the number of trips is considered, trips are not closely correlated with wellbeing but are correlated with risk of social exclusion. Those with higher levels of risk of social exclusion are likely to do less trips ($p<0.05$). However, higher trip rates are associated with stronger bridging networks ($p<0.01$) and to a lesser extent with

bonding networks ($p<0.05$). Theses, in turn, are correlated with wellbeing. Trips thus appear to have a direct link with risk of social exclusion and an indirect link with wellbeing, through social networks.

DISCUSSION AND CONCLUSIONS

These findings confirm and extend the conclusions from the previous analysis. The surveys provide strong evidence that, the higher the risk of social exclusion, the less mobility one has, the fewer the mobility options and the greater the difficulties undertaking activities. However, some of those who have the highest risk of exclusion have a relatively high level of realised mobility, commonly using public transport. These trips tend to be of the form of 'hanging-out'. This activity is important to maintain personal wellbeing though interpersonal interaction. This in turn may create future opportunities for social inclusion through bridging networks when the ability to travel, for example to work, becomes an important component in social exclusion.

The findings again support the conclusion that undertaking travel in itself does improve a person's likelihood of social inclusion, both directly and through a mediating influence as a means to increase social capital and connection to the community. In terms of linkages to wellbeing, travel is a functional activity which enables other activities to take place, which in turn are important for a person's well-being: being included, being connected to social networks and the community. While personal characteristics (Locus of Control and Affect) are related to the uptake of these activities, it would seem that without the ability to be mobile, the opportunities cannot be taken up.

Thus, this confirms the important mediating factor of networks and connections to the community for social inclusion and self-rated satisfaction with life, which in turn confirms the importance of the ability to have mobility.

REFERENCES

Bell, D., in association with Currie, G., Stanley, J. and Fletcher, M. (2006). *Buses in Outer Suburban Melbourne, Multi-modal Transport Solutions*, July.

Bronfenbrenner, U (1979), *The ecology of human development: experiments by nature and design*, Harvard University Press, Cambridge, Massachusetts.

Burchardt, T., LeGrand, J. and Piachaud, D. (2002). Degrees of exclusion: Developing a dynamic, multidimensional measure, in Hills, J., Le Grand, J. and Piachaud, D. *Understanding Social Exclusion*, Oxford University Press, Oxford, pp.30-43.

Chavis, D.M, Florin, P., Rich, R. and Wandersman, A. (1987). *The role of block associations in crime control and community development: The Block Booster Project.* Final Report to the Ford Foundation, 1987.

Cummins, R. (2001). Life satisfaction: Measurement issues and a homeostatic model. In B. Zumbo (ed) *Social Indicators and quality of life research methods:*

Methodological developments and issues, yearbook, 1999, Amsterdam: Kluwer Academic.

Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K, Stanley, J., Morris, J., Kinnear, R. and Stanley, J (2009). Investigating links between transport disadvantage, social exclusion and well-being in Melbourne – Preliminary results, *Transport Policy*, 13, No. 3, July.

Diener, E., Emmons, R.A., Larsen, R.J., and Griffin, S. (1985). The Satisfaction with Life Scale. *Journal of Personality Assessment*, 49, 71-75.

Manderson, L 2005, 'Social capital and inclusion: Locating wellbeing in community', In Manderson, L. (ed) Rethinking wellbeing, API Network, Perth, Western Australia, pp. 161-185.

Mollenkopf, H., Marcellini, F., Ruoppila, I., Szeman, Z., and Tacken, M. (Eds.) (2005). *Enhancing mobility in later life – Personal coping, environmental resources, and technical support. The out-of-home mobility of older adults in urban and rural regions of five European countries*. Amsterdam: IOS Press.

Putnam, R. (1995). Bowling alone: America's declining social capital, *Journal of Democracy*, **6,** 65-78.

Rotter, J.B. (1966). Generalized expectancies of internal versus external control of reinforcements. *Psychological Monographs*, 80 (whole no. 609).

Social Exclusion Unit (2003). *Making the Connections: Final Report on Transport and Social Exclusion,* Accessed November 2003, http://www.socialexclusionunit.gov.uk/publications/reports/html/transportfinal/summary

Stanley, J. and Stanley, J. (2004). *Improving Public Transport to Meet Community Needs: A Warrnambool Case-study*, October, Bus Association Victoria, Melbourne

Stanley, JR and Stanley, JK (2007). Public transport and social policy goals, *Road & Transport Research*, vol 16, no. 1, March

Stanley, J., Hensher, D, Stanley, J., Currie, G., and Greene, W. (2011). Social Exclusion and the Value of Mobility. Journal of Transport Economics and Policy, vol 43, no 4.

Stanley, J. R., Stanley, J.K. Currie, G., Delbosc, A. and Vella-Brodrick, D. (under review). The place of transport in facilitating social inclusion via the mediating influence of social capital.

Stone, W, Gray, M. and Hughes, J. (2003). *Research Paper No. 31: Social Capital at Work: How Family, Friends and Civic Ties Relate to Labour Market Outcomes*. Australian Institute of Family Studies, April.

Vella-Brodrick, D. and Stanley, J. (under review). All aboard - destination: well-being': The mediating role of psychological needs in the relationship between transport and well-being,

Victorian Integrated Survey of Travel and Activity (VATS) (2009). http://www.transport.vic.gov.au/Doi/Internet/planningprojects.nsf/AllDocs/7E437B50F6AACA38CA25728000146838?OpenDocument