



Exploring transport to arts and cultural activities as a facilitator of social inclusion

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ABSTRACT

This paper explores the relationship between travel and social inclusion in relation to a relatively rarely examined group of travel destinations—arts and cultural activities. This paper examines travel behaviour to arts and cultural activities and how this relates to social inclusion. Research literature associated with these issues is examined and then an analysis of a household travel survey in Melbourne, Australia, is undertaken to explore how travel to arts and cultural activities varies by income, car ownership and location. The paper outlines a range of evidence linking participation in arts and cultural activities and positive outcomes for social inclusion. Arts and cultural activities do not fit well into traditional household travel survey definitions of trip purposes. There is also no definitional difference between travel to activities and ‘participation’ or ‘attendance’ in arts and cultural activities. This is unfortunate since social outcomes may vary by participation or attendance. Travel survey analysis shows that like other activities trip rates to arts and cultural activities increase with income. However higher participation is demonstrated for zero- and one-car households, which contrasts with previous research of work, education and social travel. Higher participation is also demonstrated for those living in inner parts of the city. The paper suggests that most travel to arts and cultural activity is quite localised and hence much travel may be led by the diversity and range of local opportunities provided. These are particularly high in inner parts of the city. A high share of travel is also demonstrated for older people, who are thought to have the time and desire for greater participation in arts and cultural activities.

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1. Introduction

Transport and its impact on social inclusion has been the subject of a range of research since the formation of the Social Inclusion Unit in the UK in 2001. The focus of transport issues has mainly been on access to work, education, healthcare, shopping and social activities since in general these are more commonly seen as important activities from a social inclusion perspective (Church et al., 2000; Social Exclusion Unit, 2003; Lucas, 2004).

This paper focuses on social inclusion in relation to a relatively rarely examined group—arts and cultural activities. It is part of a Ph.D. project and a wider research program exploring links between transport and social exclusion (Currie et al., 2009). This paper describes a part of this project concerning the examination

of travel behaviour to arts and cultural activities and how this relates to social inclusion. This involves an analysis of a household travel survey in Melbourne, Australia.

The paper starts with a review of evidence linking participation in arts and cultural activities to social inclusion. It then presents a description of the methodology employed in exploring travel behaviour evidence. This is followed by an outline of the results of the study analysis. The paper concludes by outlining the key findings of the paper and discussing what these suggest in relation to transport and social inclusion in relation to arts and cultural activity.

2. Arts and cultural participation and social inclusion

“An individual is socially excluded if he or she does not participate in key activities of the society in which he or she lives” (Burchardt et al., 2002, p.30).

From the above perspective non-participation in key activities is the basis of a definition of social exclusion. The ‘major dimension’ of social exclusion identified in the literature suggests

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the following with regards to activities (based on Burchardt et al., 2002; Currie et al., 2009):

- consumption—which can be related directly to income level;
- production—which can be directly related to employment;
- political engagement—which can include active participation in local committees or political parties and
- social interaction—which is more commonly associated with social travel.

From the above perspective it is easy to see how engagement in work, education and social activities might thus be related to social exclusion. However a range of research evidence has suggested that participation in arts and cultural activities can also foster social inclusion. Positive social and health impacts of cultural participation have been identified by research studies, including the following outcomes:

- increased confidence and development of social support networks (Matarasso, 1997; Jermyrn, 2001);
- increased self-determination and control (Jermyrn, 2001; Kelaher et al., 2008);
- improved mental health, happiness, learning new skills and linkages to education and training (Matarasso, 1997; White, 2006) and
- employment (White, 2006).

Some studies have also suggested wider community level impacts, including improved social cohesion and community identity, increased political awareness and engagement (Matarasso, 1997), improved knowledge of social and cultural issues (Matarasso, 1997; Kelaher et al., 2008) and economic development (White, 2006).

In Australia a health promotion agency called 'VicHealth' funded research into the impacts of a community performing arts project (Kelaher et al., 2008). This identified increases in social support, relatedness and autonomy for participants. Community level outcomes included development of ongoing community cultural development projects in communities and audiences identifying they had been presented with new ways to address community issues. Interviewees in this research identified that the populations engaged in projects were not likely to participate in other types of community political activity, such as meetings or committees. Hence arts and cultural activities were seen as a way of engaging sections of the community not commonly participating in community and political activities. Is it possible therefore that because of this arts and cultural activity might be an effective means of targeting disadvantaged groups to encourage social inclusion?

Another evaluation by the same agency considered the impacts of a community arts participation scheme (VicHealth, 2003). This found positive outcomes in terms of

- developing positive relationships;
- connecting diverse communities;
- connecting with health and welfare services;
- working against discrimination and violence and
- economic participation, including pathways to employment.

A state government community indicators project in Victoria, Australia, developed a framework for measuring well-being at a community level (Wiseman et al., 2006). This included 'participation in and opportunities to participate in arts and cultural activities' as measures, which were considered to create 'culturally rich and vibrant communities' (Wiseman et al., 2006 p.44). The implication is that cultural activities are seen to relate to strong positive

community outcomes. However this is an input to rather than an outcome of that study.

Overall therefore, it is understood that while participation in the arts may not be as critical to inclusion as employment or an adequate income, there are two key reasons why exploration of the relationship between arts and cultural participation and social inclusion is warranted:

1. the arts have been demonstrated to engage socially excluded people including those who do not, or may never, participate in employment or formal education or training, and provides opportunities for meaningful social participation for these people who may otherwise remain isolated and
2. participation in these activities has outcomes including the development of positive relationships and learning new skills that may lead to positive outcomes in the 'hard' indicators of inclusion such as employment.

The paper now explores if transport behaviour acts to illustrate these links.

3. Methodology

3.1. Data sources and approach

Access to arts and cultural activities was explored through an analysis of the household travel trip database from the Victorian Activity Travel Survey (VATS) for Melbourne, Australia. 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 for all people (including children) in surveyed households. Data are collected through a postal questionnaire, which also includes demographic variables (Transport Research Centre, 2001). About 1% of households in Melbourne are covered by the survey, which adopted a random sampling approach to ensure a representative sample of households and days of the week is covered. Data analysed in this paper are from the 1994–1999 surveys, the most recently available source. Analysis uses data combined from the VATS household files³, person files and stop⁴ files. Selected sample characteristics are detailed in Table 1.

The general approach of the analysis was to examine the following two key research questions:

- What types of arts and cultural activities are included in the database?
- How does income, car ownership and home location relate to arts and cultural participation?

3.2. Definition of arts and cultural activity

Culture is a contested term and has been defined as 'the collective patterns of behaviour and shared sense of meaning of social groups' (Australian Bureau of Statistics, 2001 p.270) and can also be viewed as the 'development and expression of the values of a community' (Hawkes, 2001).

³ Household: "All people who normally live at the surveyed address—even if they are away on the travel day. Includes anyone else staying at the surveyed address on the night before the travel day." (TTRC, 2001, p. 11)

⁴ Stop: single-mode travel stage. A stop is any destination, travelled to for any purpose—including modal interchanges. As such, each stop is characterised by use of a single mode of access. (Ibid., p. 21)

Table 1
Selected sample characteristics.

Sample characteristics	Percentage of sample
Gender	
Female	51.2
Male	48.2
Not stated	0.6
Age group	
0–14	18.1
15–24	13.1
25–44	30.7
45–64	23.0
65–74	8.1
75+	4.7
Not stated	2.3
Income quintile	
Lowest	21.2
Second	15.8
Third	13.7
Fourth	21.6
Highest	27.8

Creative activity is one form of cultural expression. For example:

People participating in various forms of cultural expression, such as the arts are empowered through being creative, developing and using skills, and contributing to cultural identity. (Australian Bureau of Statistics, 2001, p. 270).

The Australian Bureau of Statistics provides examples of types of cultural participation and differentiates between 'creative participation' and 'attendance' as two distinct participation types.

Involvement can include such creative pursuits as painting, acting or playing a musical instrument, which we define as 'creative participation'. Involvement can also cover the enjoyment one gains through experiencing the creative or artistic works of others such as seeing a movie, or visiting a museum or art gallery, which we define as attendance. (Australian Bureau of Statistics, 2006).

The ABS publishes data regarding people's attendance at cultural venues and events over the last year. Event types and attendance rates are listed in Table 2 below. On this basis the cinema, parks aquariums, libraries and gardens can be seen as the more common activities engaged in with cinema attendance being undertaken by almost two thirds of those surveyed.

Table 2 also illustrates the results of an analysis mapping the arts and cultural activities defined by the ABS as it relates to those collected in the VATS database. It is evident that a good match can be made between some variables, for example cinemas, galleries, museums and libraries. However the relationship between some other variables is less clear. A key limitation of the VATS data to understanding the breadth of activities people may consider arts and cultural is that it is not possible to identify the full range of trip purposes to non-arts and cultural venues, or to examine arts and cultural activity undertaken within the home. For example, trips to 'popular music concerts' cannot be analysed from the VATS data in the form used for this analysis, as it is not possible to separate a popular music concert held in a 'nightclub' or 'pub/bar' or 'hall' (VATS variables 0803, 0804 and 0809) from attendance at these venues for other purposes. Attendance at performing arts events held in venues other than 'theatre,' for example festivals or street performances, will also not be captured in this analysis. A second stage of this research (not reported here) identifies the range of activities people consider to be part of their participation in arts and cultural activity.

Table 2
Persons attending selected cultural venues and events.

Venue or activity	Attendance rate (%) ^a	VATS variable Code
Cinema	65.2	0802 Cinema
Zoological parks and aquariums	35.6	–
Local, state and national libraries	34.1	0814 Library
Botanic gardens	33.7	–
Popular music concerts	25.2	–
Art galleries	22.7	0813 Gallery/museum
Museums	22.6	0813 Gallery/museum
Theatre performances	17.0	0801 Theatre
Musicals and operas	16.3	0801 Theatre
Other performing arts	16.6	0801 Theatre
Dance performances	10.2	0801 Theatre
Classical music concerts	9.4	0801 Theatre

^a Percent of population aged 15 years and over (Australian Bureau of Statistics, 2008 p. 13).

The other major omission from the VATS categories is access to parks and zoological gardens, one of the most commonly visited activities in the ABS survey. Unfortunately 'zoological parks', 'aquariums' and 'botanic gardens' cannot be separately identified in the VATS data from 'parks' in general or 'tourist places' in particular. This is unfortunate since tourism activity covers a wide range of potential destinations, including retailing, recreational activities, including 'theme parks' and general touring i.e. looking at places. It is unclear if these are necessarily related to arts and cultural activity.

An interesting observation from these comments is that traditional household travel surveys do not match well with the definitions of travel to arts and cultural activities. This may be explained by the wide definitional problem associated with the term; however activities such as visiting parks and attending music concerts are hardly unusual. In addition traditional surveys of this type do not differentiate between creative participation (such as painting) and attendance (such as experiencing the work of others). Whilst this might be seen as 'splitting hairs' from the point of view of traditional travel survey design it is an important definitional perspective for this research.

To avoid definitional confusion over validity of activities included in the analysis the VATS variables identified in Table 2 were adopted. The research focused on trip rates per person per day measured in terms of trip 'stops'. These are defined as a single mode travel stage linked to a trip purpose. This analysis excluded 'stop' records associated with modal interchange and focussed only on purpose related 'stops'. In addition the trip purpose 'going home' was excluded to better understand access to non-home destinations. Two major trip purposes were explored on this basis—trips to arts and cultural activities and all other trip purposes.

4. Results

4.1. Arts and cultural activity trips

Table 3 shows the arts and cultural activity trip records included in the VATS database.

Overall some 1721 trip records are included in the database with an average of 0.96 of 1% of total daily trips involving arts and cultural activities. Cinema and library dominate activities in a similar pattern to the activity participation rates illustrated in Table 2.

Table 3
All trips to arts and cultural destination places—VATS 1994–1999.

Variable	Frequency of trip records
Cinema	866
Library	700
Theatre	155
Gallery/museum	0
Total	1721

Analysis of these trips established that:

- Average daily trip rate per person in arts and cultural activities was 0.0216 per day (total cases of all trips is $n=78,064$). This related to a total activity trip rate of 2.2175 trips per day (excluding return to home trips and mode change 'stops').
- The main modes used to complete trips to arts and cultural activities were; car based (69.8%), walk/cycle (23.6%) and public transport (6.2%). Car access is slightly lower than for all travel (74.7%) with activity transport (23.6% vs. 19.3%) and public transport use (6.2% vs. 5%) being notably higher.

While car access dominates all travel in Melbourne, arts and cultural activities are slightly less car dependent.

4.2. Income

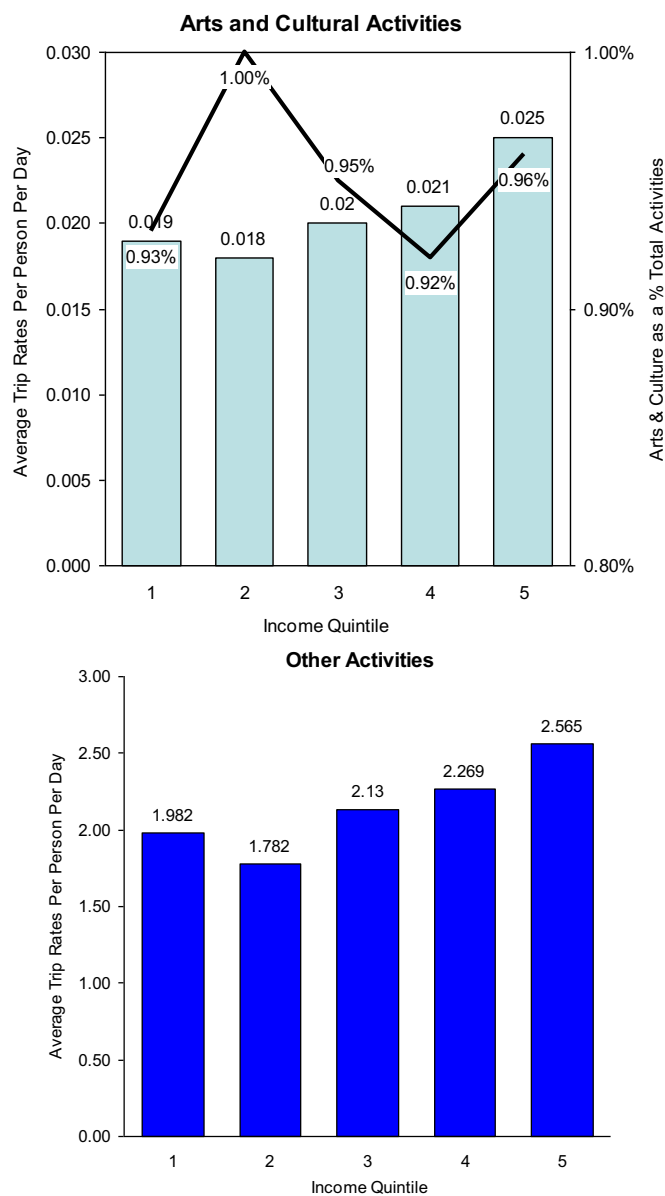
Fig. 1 shows the relationship between average trip rates for arts and cultural trips compared to all other trip purposes using the approaches described above.

This analysis shows that:

- In general higher income generates higher trip rates and thus higher levels of participation in all the activities examined;
- Trip rates are higher for income quintile 1 compared with quintile 2 in all activities. They then increase above quintiles 1 and 2 as income grows.
- As a share of total activities (as indicated by the black trend line), arts and cultural activities lies between 0.92 of 1% and 1%. Interestingly income quintile 2 has the highest share of trips in arts and cultural activities but the lowest total trip rate.

After having explored the raw survey data the following factors may act to explain these findings:

- There seems to be much logic in the view that higher income enables greater participation in life's activities compared with low income. As a result trip rates for all activities generally increase with income quintile.
- A common feature of those in income quintiles 1 and 2 is low workforce participation, which in part acts to explain lower incomes. This includes higher than average shares of retirees and age pensioners and people aged over 65.
- Those in income quintiles 1 and 2 also include high shares of single person households and households with low occupancy (2 or less people). In part this explains lower household income since there are less likely to be multiple income earners in each household. It is possible that personal trip rates to activities are lower in these groups because there is a preference for travel to activities in groups with other household members. Clearly there are less opportunities for this in smaller households. This observation matches observations of travel to cinemas and the theatre, which have relatively rare attendance of people as individuals and much more common attendance in at least pairs or groups of family and friends.



Source: Analysis of the Victorian Activity Travel Survey 1994-1999

Fig. 1. Trip rate analysis—income and activities.

- Trip rates for income quintile 1 are higher than for quintile 2. This might be explained by a considerably higher share of retirees/pensioners in quintile 2 (24%) compared with quintile 1 (16%). Quintile 1 also has higher workforce participation (37%) than quintile 2 (30%). It could be hypothesised therefore that quintile 2 has lower general trip rates due to low general propensity to travel as a preference in older age. Higher shares of realised travel to arts and cultural activity in quintile 2 might thus be explained by a greater availability of time to engage in these activities as well as a greater preference for these activities relative to other activities. Quintile 1 meanwhile compared to quintile 2 are more representative of younger/middle aged working people who are generally more active and hence have higher trip rates. However time availability might be more restricted by having to engage in work.
- In practice explanations for lower trip rates and higher shares of travel to arts and cultural activity in quintile 2 are likely to be more complex than this. For example quintile 2 has almost double the share of adult couples without children (29%)

compared with quintile 1 (15%). It might be theorised that more time is available to visit arts and cultural activities because there are less child rearing responsibilities in these households. This argument does not however seem to apply to single parent households; quintile 2 has above average shares of single parent families (14% compared with 8%) and a higher share than quintile 1 (9%). Perhaps it is child caring responsibilities in this group that limits overall trip rates but also a desire to engage children in the educational elements of arts and cultural activities, which means a high share of trips made are to activities of this type.

4.3. Car ownership

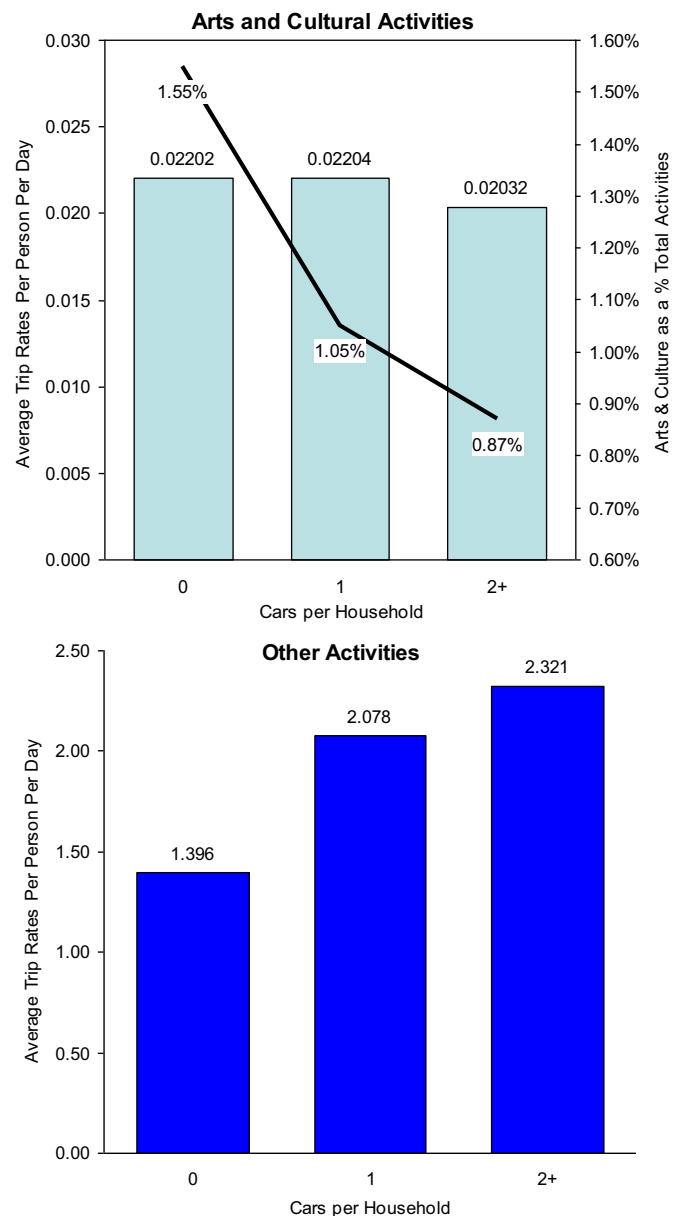
Fig. 2 shows the relationship between average trip rates for arts and cultural trips compared to all other trip purposes based on car ownership per household.

This analysis shows a much greater contrast between travel behaviour in relation to arts and cultural activity. In general trip rates increase for most activities in relation to car ownership. However this is not the case for arts and cultural activity. Here trip rates are relatively stable regardless of car ownership; however there is a slight decline for households with 2 or more cars compared to households with zero or one car. Analysis also shows that as a share of total trips (as indicated by the black trend line) participation in arts and cultural activity is a much higher share for zero car households. Share declines for 1 car households and is the lowest for households with 2 or more cars.

There is much research evidence suggesting that low and zero car ownership is a cause of difficulties in accessing activities. For example:

- The UK Social Exclusion Unit (Social Exclusion Unit, 2003) found that people without cars paid higher grocery prices due to the need to walk to local shopping, which was generally more expensive. It was also found that almost one third (31%) of people without a car reported difficulties accessing their local hospital compared with 17% of people with a car.
- Rugg and Jones (1999) found that young people working in rural England needed their own transport to maintain employment (p. 22);
- Qualitative research conducted with low-income, non-car-owning mothers in the UK describes stress from walking with young children; difficulty in maintaining social networks; mothers not accessing health and community services and families not having recreational day trips (Bostock, 2001).
- Australian examples include the inability to access after school activities and sports for children (Hurni, 2007, p. 10.9) and the perception by young people that owning a car was the most significant factor in their decisions regarding undertaking post-secondary education (LGCTWG, 2007, p. 17).
- Importantly, within groups of socially disadvantaged people, those without cars tended to travel less (Stanley and Stanley, 2007), thus possibly reducing their well-being and opportunities for inclusion.

These findings contrast significantly with the generally stable trip rates but higher share of travel made to arts and cultural activities by those without a car. What is also interesting about the findings in Fig. 2 is that there is little relationship between the income results (Fig. 1). Generally much research associates car ownership with income. This analysis suggests this does not necessarily correlate well with participation or travel rates to arts and cultural activities.



Source: Analysis of the Victorian Activity Travel Survey 1994–1999

Fig. 2. Trip rate analysis—car ownership and activities.

Having reviewed the raw data for the car ownership groups the following factors might explain these results:

- The share of retirees and pensioners seems to correlate well with lower car ownership and the degree of arts and cultural activity. Some 34% of zero car households are retirees/pensioners compared with 17% (1-car households) and 6% (2+ car households). It is possible that higher participation share in zero car households is related to the higher availability of time and also a greater desire of older people to engage in arts and cultural activities. The relatively flat trip rates by car ownership group might be explained by a lower propensity to make lots of trips at an older age balanced by a higher share of total travel made to arts and cultural activities.
- One-car households (18%) but particularly zero car households (41%) have significantly above average shares (9%) of single-person households. It was earlier theorised that because many arts and cultural activities (cinema/theatre) tend to involve

travel in groups, single person households might have lower trip rates because they have no other household companions. These results seem to refute this hypothesis since a slightly higher trip rate and a much higher share of total travel are being made by a group (zero car households) that is composed of significantly higher shares of single-person households. Could single-person households have a higher propensity for arts and cultural travel rather than a lower propensity as originally theorised?

- Almost three times as many zero car households are located in inner Melbourne (17%) compared with 2+ cars households (6%). It is possible that higher share of trips by zero car ownership households is a result of the wider opportunities to participate in arts and cultural activities in inner Melbourne compared with suburban areas. This might be particularly aided by the much higher quality of public transport and walk/cycle options in inner areas. This is an issue of importance to households without a car.

4.4. Home location

Three locations are defined to analyse trip rates by residential location: inner, middle and outer Melbourne.⁵ The key factors driving behaviour by location are complex but in general include:

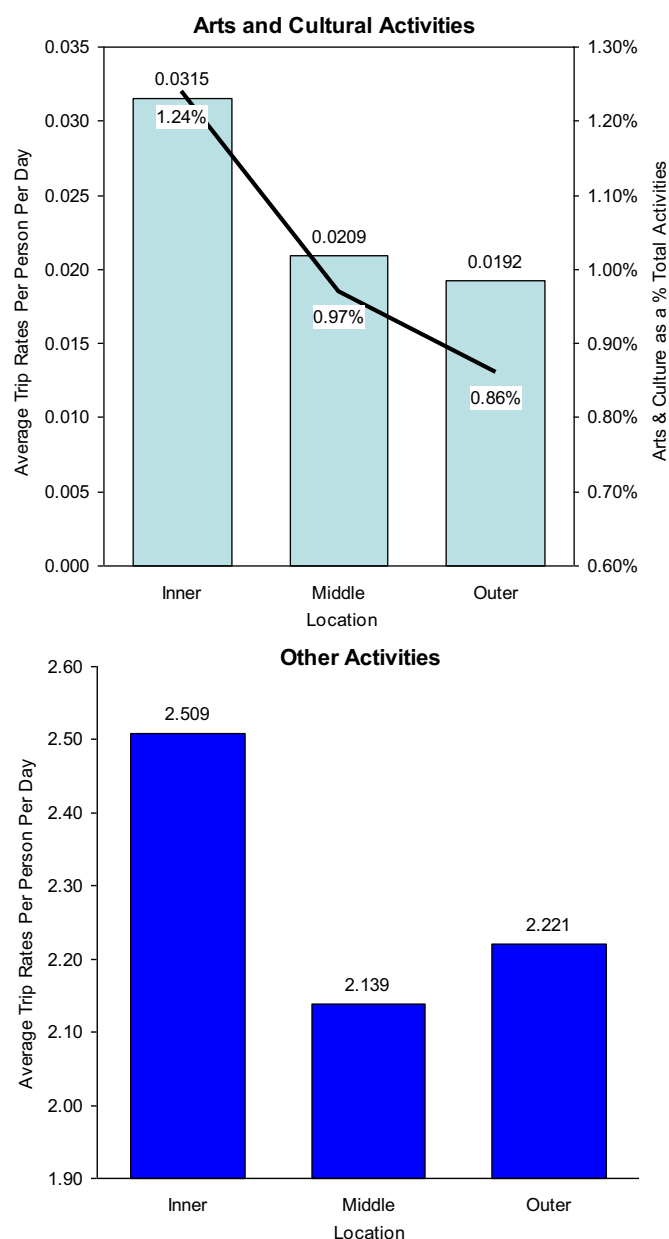
- Availability of public transport—(Currie, 2009) using the same definitions of zones and measures of the quantity of public transport (including frequency and coverage of services) showed that outer Melbourne had a service quantity that was 7% that of inner Melbourne while middle Melbourne was about a quarter of the service quantity of inner areas.
- Availability and accessibility of local arts and cultural destinations—there are a large number of arts and cultural venues located within inner Melbourne. These are large galleries, and museums with a tourist focus. While there are many similar facilities in middle and outer areas they are much less likely to be within walk, cycle or even public transport access of people living locally. Hence residents in middle and outer Melbourne are much more likely to require car access to venues.

Another key finding sets an important context for these results. Analysis confirms that 70.5% of all trips to arts and cultural activities are made to destinations in local government areas (LGAs) by residents living in those areas. Since the metropolitan area is divided into 31 LGAs travel within LGAs is hence largely local and over relatively short distances.

Fig. 3 shows the relationship between average trip rates for arts and cultural trips compared to all other trip purposes by residential location within the city.

This analysis shows that trip rates by location show a different trend for arts and cultural activity compared with other activities. While trip rates are the highest in inner Melbourne for all activities they decline in middle and further decline in outer Melbourne for arts and cultural activities. Arts and cultural activities as a share of all trips shows a similar relationship with location. This is not the case with 'other activities'; middle suburbs have the lowest trip rates compared with inner and outer areas.

⁵ Inner: Melbourne, Port Phillip, Yarra. Middle: Banyule, Bayside, Boroondara, Brimbank, Darebin, Glen Eira, Greater Dandenong, Hobsons Bay, Kingston, Manningham, Maribyrnong, Monash, Moonee Valley, Moreland, Stonnington (part), Whitehorse. Outer: Cardinia, Casey, Frankston, Hume, Knox, Mornington Peninsula, Maroondah, Melton, Nillumbik, Whittlesea, Wyndham, Yarra Ranges.



Source: Analysis of the Victorian Activity Travel Survey 1994–1999

Fig. 3. Trip rate analysis—home location and activities.

A number of explanations might be hypothesised to explain these relationships:

- Inner Melbourne has a larger number of arts and cultural venues. Since most arts and cultural travel is local (70.5% of trips are made within the same LGA). Then it seems logical that more trips would be made by residents in inner areas. The implication is that attendance might be driven to some degree by the scale and number of opportunities to participate.
- Inner Melbourne has a higher share of higher income residents than outer Melbourne. Since income is related to volume of trips this might explain why all activities are higher in inner areas.
- Outer Melbourne is highly car dependent with a large share of outer Melbourne households having 2+ cars. Analysis above shows that households with 2+ cars have a high trip rate for 'other activities' but a lower one for arts and cultural activities'.

These findings are consistent with the trip rate trend for outer Melbourne. They could also be indicative of a 'rationing' of trips by low income car owners in outer suburbs. Arts and cultural activities may not be seen as an essential activity for this group potentially due to the relatively high costs of transport for this group.

- Inner Melbourne has a higher share of zero car ownership households than middle and outer Melbourne. As shown in Section 4.3 these households also make a higher share of trips to arts and cultural activities than households with higher car ownership.

4.5. Other influences on travel to the arts

The study has also assessed the influence of age and life-cycle stage on travel to the arts. These analyses indicate that both younger (15–24) and older (65–74) age groups have higher rates of participation, relative to other age groups, in arts and cultural activity as opposed to other activities.

In relation to lifecycle stage, the presence of children in the home was found to relate to a slightly lower trip rate than households without children. However, there was no different impact on travel to arts and cultural activity, as to travel to other activity types.

5. Discussion and conclusion

This paper considers the relationship between travel and social inclusion by examining a relatively rarely considered set of activities—those associated with arts and cultural pursuits. The major focus is analysis of a household travel survey aimed at exploring how arts and cultural activity is included in conventional household surveys of this kind and also by examining how income, car ownership and home location affect travel to arts and cultural activities and other activities.

Most of the analysis of issues associating transport with social inclusion has examined travel to work, education and social activities. However a wide range of evidence was presented illustrating that arts and cultural activities can also be important in relation to social inclusion. Specific evidence also suggests that participation in arts and cultural activities can be effective in addressing social disadvantage for social groups that are less likely to engage in other approaches to addressing social needs.

The paper has found that arts and cultural activities can encompass a wide range of trip types and can include both participation and attendance at activities. These activities do not fit well into conventional definitions of trip purposes in household travel surveys. Some subsets of activities (e.g. visiting parks) are not included in the survey as analysed and the division between participation and attendance at activities is not considered.

Travel survey analysis found that in general income and trip rates per day are positively correlated for all activities, including those related to arts and culture. Low workforce participation in lower income quintiles seems to largely explain this situation. Interestingly it was shown that income quintile 2 has the highest share of total trips in arts and cultural activities of all other quintiles. This might be explained by the high share of pensioners and retirees in this group. It is theorised that older age groups make less total travel than other age groups but that they have more time available to undertake activities and have a greater relative desire to visit arts and cultural activities.

Most research shows that having a car available for travel is positively linked to high participation rates in activities and also in the wider positive impacts that participation can have on social

inclusion. However analysis in this research showed quite the opposite relationship. Households with no car showed similar trip rates to those with one car and slightly higher trip rates than those with two or more cars. In addition the share of trips taken in arts and cultural activities was higher for zero car households and the lowest for 2+ car households. A high share of retirees/pensioners in zero car households and the fact that many of these households are in inner Melbourne seem to explain these findings.

The research also showed that there are higher total trip rates and shares of participation in arts and cultural activities in inner Melbourne. This might be explained by the larger number of venues and also the better accessibility to these venues for non-car-owning households. Most travel to arts and cultural activities is local. It hence follows that living nearer to a wider range of arts and cultural activities is likely to encourage higher participation rates. This potentially raises the question of 'self-selection', that is the possibility that people locate their residence close to the activities they participate in. A key factor influencing home location in Melbourne is the poor affordability of inner-Melbourne residences. While self-selection is a possible influence, affordability also needs to be considered.

The paper has generated conflicting theories as to how participation in arts and cultural activities might vary with household size:

- The low trip rates of income quintiles one and two have been linked to smaller and single person household size. It has been suggested that this might be caused by a preference for group attendance at arts and cultural activities. A single person household clearly has less opportunity to attend events with other household members.
- A contrast to this higher trip rates was demonstrated for households living in inner Melbourne. A very high share of these residents (41%) is from single person households.

Overall the analysis has shown many similarities with previous research covering employment education and social trip types but also many new perspectives. While trip rates to all activities, including arts and culture, increase with income a very different relationship to zero- and one-car ownership has been demonstrated. Higher participation rates in arts and cultural activities are shown for those with zero and one car per household than for those with two or more cars. The propensity and time availability for older age groups to undertake arts and cultural activity have been suggested as one explanation for this. It is also possible that having a car requires an income to cover operating costs and that as result those on higher incomes and with higher car ownership have less time available to undertake what might be considered more discretionary travel. This argument might also explain low participation rates for low income groups living on the fringe of the city. Previous research has shown that to some degree lower income groups living on the fringe of cities have high car ownership 'forced' on them due to lack of alternative transport options and a need for mobility (Currie and Senbergs, 2007). It might be that these groups have a lower financial capacity or time availability to participate in arts and cultural activities because of the high costs of operating cars on their low incomes. In these circumstances it is also likely that more discretionary activities are marginalised in favour of higher priority trips.

There is unlikely to be a single transport policy that will eradicate exclusion; rather, this research seeks to understand one facet of a broader picture. The inequitable distribution of accessibility to the arts may be rectified in part by provision of locally accessible activities in areas that are currently

underserved, or by better targeting those groups currently excluded from participation. Better transport, infrastructure and land-use mix planning at the initial stages of residential development may address accessibility problems.

Overall it is clear that a range of wider questions are raised by the research, which require greater exploration. The research is proceeding with field surveys and focus groups with a range of social and economic groups and with the managers of arts and cultural venues to explore these issues in greater depth.

References

- Australian Bureau of Statistics, 2001. 4160.0 Measuring Wellbeing. Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics, 2006. 4153.0—How Australians Use Their Time, 2006. Australian Bureau of Statistics, Canberra.
- Australian Bureau of Statistics, 2008. 4172.0 Arts and culture in Australia: A statistical overview. Australian Bureau of Statistics, Canberra.
- Bostock, L., 2001. Pathways of disadvantage? Walking as a mode of transport among low-income mothers. *Health and Social Care in the Community* 9 (1), 11–18.
- Burchardt, T., Grande, J.L., Pichaud, D., 2002. Degrees of exclusion: developing a dynamic, multidimensional measure. In: Hills, J., Grand, J.L., Pichaud, D. (Eds.), *Understanding Social Exclusion*. Oxford University Press, Oxford.
- Church, A., Frost, M., Sullivan, K., 2000. Transport and social exclusion in London. *Transport Policy* 7, 195–205.
- Currie, G., 2010. Quantifying spatial gaps in public transport supply based on social needs. *Journal of Transport Geography* 18, 31–41.
- Currie, G., Richardson, T., Smyth, P., Vella-Brodrick, D., Hine, J., Lucas, K., Stanley, J., Morris, J., Kinnear, R., Stanley, J., . Investigating links between transport disadvantage, social exclusion and well-being in Melbourne—preliminary results. *Transport Policy*, in press, corrected proof, available online 28 February 2009, doi:10.1016/j.tranpol.2009.02.002.
- Currie, G., Senbergs, Z., 2007. Exploring forced car ownership in metropolitan Melbourne. *Australasian Transport Research Forum*, Melbourne, Australia.
- Hawkes, J., 2001. *The Fourth Pillar of Sustainability: Culture's Essential Role in Public Planning*. Common Ground Publishing Pty Ltd and the Cultural Development Network (Vic.), Melbourne.
- Hurni, A., 2007. Marginalised groups in western Sydney: the experience of sole parents and unemployed young people. In: Currie, G., Stanley, J., Stanley, J. (Eds.), *No Way to Go: Transport and Social Disadvantage in Australian Communities*. Monash University ePress, Melbourne.
- Jermyn, H., 2001. *The arts and social exclusion: A review prepared for the Arts Council of England*.
- Kelagher, M., Berman, N., Curry, S., Johnson, V., Dunt, D., Joubert, L., 2008. Report for the evaluation of the Community Arts Development Scheme. Unpublished Report to VicHealth.
- LGCTWG (Let's GET Connected Transport Working Group), 2007. *The challenge of getting around: rural, remote and isolated—Rural youth transport survey 2005–2006: Wellington and East Gippsland*, Sale. Wellington Shire Council, Victoria, p. 46.
- Lucas, K., 2004. Running on empty: transport, social exclusion and environmental justice. In: Lucas, K. (Ed.), *Transport and Social Exclusion*. The Policy Press, Bristol, pp. 39–53.
- Matarasso, F., 1997. Use or Ornament: The Social Impact of Participation in the Arts. *Comedia*, Stroud, 111.
- Rugg, J., Jones, A., 1999. *Getting a Job, Finding a Home: Rural Youth Transitions*. The Policy Press, Bristol.
- Social Exclusion Unit, 2003. *Making the connections. Final Report on Transport and Social Exclusion*. Social Exclusion Unit, London, p. 145.
- Stanley, J., Stanley, J., 2007. Public transport and social policy goals. *Road and Transport Research* 16 (1), 20.
- Transport Research Centre, 2001. *Coding Frame: A Companion Document to the VATS94-VATS99 Databases*, User Manual vol. 2. RMIT University, Melbourne.
- VicHealth, 2003. *Creative connections: promoting mental health and wellbeing through community arts participation*. Victorian Health Promotion Foundation Mental Health Promotion Plan 1999–2002, Victorian Health Promotion Foundation, Carlton.
- White, M., 2006. Establishing common ground in community based arts in health. *The Journal of the Royal Society for the Promotion of Health* 126, 3.
- Wiseman, J., Heine, W., Langworthy, A., McLean, N., Pyke, J., Raysmith, H., Salvaris, M., 2006. *Measuring wellbeing: engaging communities*. Institute of Community Engagement and Policy Alternatives, Victoria University, Melbourne.