

“How times have changed”

Active transport literature review

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March 2009

Participation and equity for health

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Introduction – “How times have changed”

I was four and a half years old when I started primary school in a regional Victorian town. We had recently moved into a new housing estate and there was no primary school within walking distance. My father worked the other side of town and would drop me off to school in the car on his way to work. My mother a homemaker did not drive and was at home minding my younger sister. To get home each night I had to catch public transport on one of the town's bus services which went via the main shopping centre. Once I had reached my destination, Eric the bus driver would help the younger children to cross a busy road. Along with the other children in my neighbourhood, I had to walk just over a kilometre to my home.

Many of us who attended primary school in the 1970s would have similar stories where getting to and from school independently from grade prep through to year 12 was not only allowed but expected. By walking, cycling, taking public transport between home, school, parks, shops and friends' houses we were able to explore our neighbourhoods and beyond with increasing independence and confidence.

Contrast this scenario with the following quotes from parents of six and seven year old children who were interviewed in 2005.

“The way the world is today, you don't let them play out in the street. It would be nice to let them just run around as we used to, but you can't any more” (parent of a 7 year old boy)

“I don't let them play in the street. It's not a busy street, I'm just not comfortable to let them out there ... stranger danger I suppose (parent of a 6 year old girl) (cited in Veitch et al 2006: 387).

In the space of one generation, children's ability to negotiate and explore their own neighbourhoods has been significantly curtailed. Children are more likely to be confined to their homes and their own ever shrinking backyards. Generally speaking, international and Australian studies have shown that the age at which children are allowed to travel without adult supervision has risen. This change has been brought about by a cultural shift in norms rather than any major changes to the physical environment. Although, increased car ownership and more traffic on the road have contributed significantly to this change in attitude.

The aim of this paper is to explore the decline in children's independent mobility. Independent mobility refers to the ability of those under 18 years of age to move freely in public spaces without adult accompaniment (Whitzman, 2007). Travelling independently using active transport benefits children's physical and mental health, as well as their development as autonomous individuals. Active transport is a term which describes travel between destinations by walking, cycling or other non-motorised modes (Burke et al, 2007:656).

Much of the research on children's active transport tends to focus on physical behavioural patterns: that is, how a child got from point A to point B. Another key focus of the research is on the views and opinions of parents in relation to either real or perceived barriers to allowing their children to travel independently. There are many studies which report on how children get to and from school and negotiate their neighbourhoods, but very few explore in detail the cultural context in which children's independent mobility has been curtailed.

This paper will move beyond current modes of thinking and explore how this cultural shift has come about. How is it that in the space of thirty to forty years we have moved from having high levels of independent mobility among children to significantly lower levels? Much of this attitudinal change has come about as a result of our postmodern world where people in western society have become more adverse to risk. The certainties we took for granted a generation ago no longer apply for many people and in particular children. As a result parents put in place contingency plans to manage and reduce their child's exposure to risk.

Putnam (2000:19) argues that in industrial societies there has been a decline in social capital. He defines social capital as the connections between individuals, social networks and the norms of reciprocity and trustworthiness that arise from them. A society characterised by reciprocity is more efficient than a distrustful society. Essentially, "trustworthiness lubricates social life" (Putnam:21). There are a number of reasons why there has been a decline in social capital. The first is the pressures of time and money, including two-career families, longer working hours which have contributed measurably to the diminution of social and community involvement. Second, the impact of decentralisation of services, suburbanisation and the resultant suburban sprawl has meant that there has been a significant increase in road traffic and car-dependent lifestyles. As a result people are more likely to be commuting long distances to and from employment and to access essential services. Third, the impact of electronic entertainment like television and computers has privatised our leisure time and brought much of it indoors. The fourth is the decline in people having a sense of civic duty. This includes such things as voluntarism, participation in public life which might mean being part of the school committee, a local action group or being involved in planting trees in their local park land. People nowadays are more likely to be immersed in their own lives, often to the exclusion of others (Putnam, 2000:283, Gill, 2007: 14).

The concept of social capital in relation to understanding how children get to school independently is essential. Engendering children's independent mobility through active transport requires a pluralistic approach at many levels. From government, which has the capacity to change laws and provide a safe physical environment for children to either walk or cycle, to the endorsement of the general community who accept that children have a right to move freely within public spaces. The support of the school community including, teachers, students and parents is critical to create a culture which encourages independent mobility among children. More broadly, active

transport has spin offs for the whole planet with discernable reductions in green house gas emissions from motor vehicles.

This paper will explore a number of key areas which relate to children's independent mobility. The first is to detail the changes in values around child rearing. There is mounting evidence to suggest that parents actively anticipate and manage risks and this is reflected in the way children are raised. Evidence will be presented which illustrates how children are largely excluded from decision making processes in terms of how their day-to-day lives are organised. The impact this type of micro-management has on the development of our children as independent and autonomous individuals will be explored. The second half of this paper will detail the barriers and enablers to children's independent mobility based on findings from international and Australian studies. Finally, this paper will look at how to improve children's independent mobility using active transport with the view to creating a more environmentally and socially sustainable society.

Changes in child-rearing values

The notion of childhood is essentially an elaborate and powerful social discourse devised by adults. It reflects the ways in which adults think and talk about children (Wyness, 2006: 27, James et al, 1998). Childhood needs to be recognised and understood in terms of the cultural context of a community in its broadest sense, and is indicative of a particular time and space.

The twentieth century heralded the emergence of the “universal” child where children (in industrialised western societies) are temporarily segregated from the adult world. In its purest form, childhood is seen as a period which is imbued with happiness, free time, and a lack of responsibilities. Children are seen as being wholly dependent on their parents who are not only obligated to protect them but are responsible for shaping and moulding them into competent individuals (Valentine, 1997). Children are firmly located within the private sphere of the family and as such, are largely excluded from political and cultural processes associated with the public realm. The fact that children are largely invisible in the public sphere, is a powerful rationale for institutions and, by implication, adults to regulate their lives.

According to Wyness (2006: 4) childhood can be broken down into four distinct periods. These are:

Early	0 to 4 years
Middle	5 to 9 years
Late	10 to 14 years
Adolescence	14 to 17 years

He believes that the state of being either a child or an adult can be captured by a simplistic binary where childhood is equated with play and adulthood is equated with work. By associating childhood with play, children are seen as immature and requiring constant adult attention (Wyness:11). Ironically, adults tend to organise children’s play with their own needs in mind, rather than those of children. For many parents there is a lack of understanding of the value of play in its broadest unconstrained sense (Tranter & Malone, 2003).

The assumption that children are biologically and psychologically inferior to adults makes it extremely difficult for children to be taken seriously on their own terms. Children are often excluded from situations that enable them to demonstrate their competence. When children do move outside acceptable developmental and educational paradigms they are labelled as precocious or overdeveloped. Those who transgress the parameters of acceptable behaviour are often labelled as delinquent or troublesome (Wyness, 2006:85). However, contrary evidence suggests that children can be agents of their own life and are competent and adept at managing their own life course. For example, children may act as translators or carers for their parents and most are proficient with new technology (Valentine, 1997: 66-67). When children experience divorce they often demonstrate resilience, competence and

maturity in dealing with the uncertainty and upheavals in their family (Wyness, 2006:60).

Children are seen as transitional objects that are conceptualised in terms of what they will become, rather than who they are (Valentine, 1997:67). Using a dichotomous framework, Wyness (2006: 119-120) argues that children are perceived as lacking ontology because they are seen as incomplete, while adults are conceptualised as fully cognisant social beings in their own right.

child	adult
simple	complex
amoral	moral
asocial	social
person-in-waiting	personhood
becoming	being

The transitions children make are referred to as the 'ages and stages' model of childhood. Underpinning this model is a developmental continuum based on chronological age. In theory, the process of development is 'invariant' which means that children can only move through each stage in a predetermined way (Wyness, 2006: 122-124). At the age of 14, young people are regarded as competent (Wyness 2004: 85). However, this functionalist approach to understanding children's development does not take into account that children are social agents who actively create and reproduce social situations. For example, when children play with each other not only do they have fun, but they learn valuable social skills they can take into adulthood.

Prout (2005:84, 144) argues that it is too simplistic to reduce childhood to a set of dualisms. Rather, he argues that childhood should be seen as a complex series of inter-related components embedded in the biological, social, individual, historical, technological, spatial and material aspects of everyday life.

He offers a new way of looking at childhood which synthesises a number of key elements. In Prout's view childhood should be seen as a social construction which provides a framework for contextualising the early years of human life. Childhood is not a unilateral concept which can be applied in any country, it varies greatly according to specific structural and cultural contexts. Childhood cannot be divorced from factors such as class, gender or ethnicity and finally because children actively construct their own social lives, they are worthy of studying in their own right rather than as adjuncts to adults (Prout, 2005: 60).

Risk aversion and post-modern parenting

Cunningham aptly describes the difference between childhood today and childhood over most of the last millennium:

‘Children in the past have assumed to have capabilities that we now rarely think they have... So fixated are we on giving our children a long and happy childhood that we downplay their abilities and their resilience’ (cited in Gill, 2007:p11).

Like most other western industrial countries, Australia has seen significant changes in family and work life, the urban environment and the impact globalisation has had on national policies and prosperity. In just one generation, fewer people are marrying, more are divorcing and there has been a steady increase in the proportion of children born outside marriage (Scott, 2000: 362). Women’s increased participation in the labour market has been fuelled by a burgeoning service sector along with the equal opportunity revolution. The traditional breadwinner model of the family has been replaced in large part by two-income households. This means that many neighbourhoods are made up of empty houses during the working week and the opportunity to participate in community life has been diminished because of the demands of paid employment.

In order to assess how community perceptions have changed over a generation, Scott (2000) identified nine key concerns in the British Household Panel Survey (1996). These issues were:

1. unemployment
2. lack of safety
3. lack of discipline
4. increased pressure
5. moral decline
6. increased crime
7. drugs
8. environmental problems
9. family breakdown (Scott, 2000:355)

Scott (2000: 360) was interested in finding out how these social changes have influenced child rearing values, especially for women who are still the primary caregivers. Whether real or imagined, parents may have a propensity to take on board these negative social indicators and integrate them into the way in which they socialise their children. Further, individuals tend to reflect and reminisce on their own experiences which are used as a yardstick to measure the extent of social change.

Drawing on Putnam’s thesis that social capital has declined in recent generations, we might expect that older people would be more concerned about the disintegration of community and lack of safety. Yet, Scott’s data shows the reverse. The notion of unsafe communities is more salient among

young people in their late twenties and early thirties and falls off markedly in mid-life and older age. This is reflected by the following quote:

“We used to go and play on the cricket field. I wouldn’t let Olivia go and play on her own nowadays. There are drugs and such nowadays. Children grow up quicker these days and look older.” (Woman age 29) (Scott: 366).

Whitzman (2007:11) notes that mothers particularly those who are not working full-time tend to be more concerned about safety than fathers. These fears are compounded by women’s sense of their own diminishing access to public space. Yet, research evidence suggests that women and children’s safety is more likely to be compromised by sources within the home than in public spaces.

In response to these negative social messages parents implement measures to manage the risks of living in an increasingly unsafe world. These measures include severely curtailing children’s ability to move freely within their own neighbourhoods and beyond. One of the paradoxes of the public/private debate is that on the one hand, raising children is largely seen as a private issue between parents and their offspring. While on the other hand, when family breakdown does occur in the form of abuse or truancy, there is an expectation that the state (child protection agencies) will intervene. The threat of state intervention means that the actions of adults are under public scrutiny (Wyness, 2006: 62). Furedi blames the ‘child protection’ industry including doctors, social workers and childcare experts who via the media, government bodies and community groups inundate parents with advice about the need to supervise their children, inflating anxiety and creating moral panics (cited in Pain, 2006: 224).

The ‘stranger-danger’ theme dominates concerns that adults have about children’s safety. This theme is borne out by qualitative data collected in numerous studies (Carver et al, 2008; Romero, 2007; Timperio et al, 2004; Vietch et al, 2006; Valentine, 1997; Hillman et al, 1990, Prezza, et al 2005) where parents identify fear of strangers and molestation as a major barrier to allowing their child(ren) to roam freely. Parents’ compulsion to protect their children means that they spend much more time supervising their offspring than in previous generations. Most parents are patently aware that at some time their children will require more autonomy and space. Children are the ones most likely to initiate and negotiate more freedom and sooner or later parents have to respond to their demands (Valentine, 1997). Yet parents face a real conundrum where they have to weigh up granting more freedom and independence with social and community expectations about them being a good parent. Gill (2007: 7, 10, 62) acknowledges the double bind that parents face, but argues that children will never fully understand risk unless they experience it. Essentially parent’s aversion to risk could undermine their children’s social, emotional and physical development.

The stranger-danger discourse has been heightened in recent times by media images of child molestation and abduction. Frequent exposure to news

coverage of crime may lead parents to overestimate the probability of their children becoming a victim of crime (Lupton & Tulloch, 1999). Valentine (1997) believes that the media's portrayal of child abduction is akin to a type of terrorism because of the moral panic it creates. Statistically speaking, children are more likely to die in car crashes than at the hands of a stranger (Whitzman, 2007:10). In fact, the murder of a child by someone unknown is one of the rarest crimes. Nevertheless, there is a general public perception that the threat to children from strangers is dangerous and growing.

Another factor which has inhibited children's freedom has been an increase in volume of traffic in residential streets. Many children are not able to move freely around their neighbourhoods for fear of being injured or killed by all types of motor vehicles. Children are also discouraged from speaking with adults who are strangers. The result is a disconnection from our neighbourhoods, where there are fewer familiar faces and interactions between people who live nearby (Gill, 2007: 63). Prezza et al (2005: 438) found in her study that children whose parents had more extensive neighbourhood networks, that is, parents who were actively engaged with their neighbours and their community were more likely to associate the benefits of giving their child autonomy with their growth and maturity.

The increase in traffic has meant that children are driven everywhere in the car. This not only contributes to the congestion on the roads but also compounds the disconnection children have with their neighbourhood (Gill, 2008: 136). Public campaigns to get children to walk to school are couched in safety terms and are about managing potential risk to children. The Pedestrian Council runs a Walk Safety to School day in May each year. The website encourages parents and carers to walk to school with primary school age children. It also advocates that children up to 10 years old hold an adult's hand when crossing the road (www.walk.com.au).

In addition to stranger danger and the fear of increased traffic, there have been limits placed on children's right to explore and play freely in public space. There are many areas where children are not allowed to cycle, skateboard or play with a ball. Even playgrounds have been constructed with safety rather than fun and challenge in mind. Many of them have been designed for toddlers or young children. To the adult eye they might look impressive with brand new play equipment and no clutter. However, play grounds are meeting places for children. If there are no other children around, and the play equipment is unexciting, older children in particular tend to avoid these areas (Whitzman, 2007:22, Trantor & Malone, 2003, Veitch et al, 2006:389). Tranter and Malone (2003) argue that the lack of freedom afforded to children in the broader community extends to the school play ground. In many schools teachers restrict children's freedom to use the playground in its entirety. Often, it is those "out of bounds" areas that are the most interesting. The reasons for restrictions include difficulties in supervision, safety considerations including traffic danger, bullying, keeping the school grounds neat and orderly and keeping the children clean and tidy.

Valentine (1997: 69) undertook a study in which she conducted in-depth semi-structured interviews with parents of children aged 8 to 11 years in metropolitan and rural areas in northern England. In addition to the parent interviews, children's perspectives were canvassed via focus groups. Within these groups children were asked to talk about their experiences of getting around their neighbourhoods and how they deal with restrictions imposed on them by adults.

The results from interviews revealed that parents considered abduction to be the greatest danger faced by primary school aged children (45 per cent) rather than traffic accidents (34 per cent), drugs (9 per cent) gangs (3 per cent) and accidents at home (1 per cent). There was a perception by parents that children were more likely to be abducted by adult strangers (63 per cent) rather than adults known to the child (16 per cent) or estranged parents (10 per cent).

Interestingly, three out of five parents surveyed claimed to have had more freedom to play outside than their own children do. All the young people who took part in the discussions were given stranger-danger warnings at an early age and were able to recite these warnings verbatim "don't talk to strangers, don't take money or any sweets and don't talk to nobody you don't know". Boys were more reluctant to admit their fears.

However, their greatest concern was "being bashed" by older teenagers. Boys also expressed a concern that girls needed protection and were more vulnerable. Girls felt confident in negotiating public space because they always went everywhere with their friends. Others noted that they felt safe because there were always houses they could run to if they felt under threat.

Middle class girls had less knowledge about their local neighbourhood because they spent more time of leisure activities indoors or taking part in activities supervised by adults.

Many of the children in this study were the ones to initiate extending their spatial ranges and actively sought to increase their level of freedom and autonomy. Strategies used by some of those in this study were playing their parents off against each other, hoping that one parent would allow them to go to their chosen destination (Valentine, 1997: 76-82).

Many parents who participated in this study admitted that they were anxious and overprotective with their children, but were aware that they needed to grant their children some leeway to build resilience and independence. Mothers in particular, tended to give in to "children's attempts to push back their spatial boundaries because they are distracted by domestic pressures, or as a last resort to shut the kids up" (Valentine, 1997: 73-79).

This study found that children played an active role in redefining their parents' perceptions of their ability to negotiate their own neighbourhood. A common tactic used by children was to demonstrate their competence before asking permission to change their boundaries. This might mean asking to go to the

local park, and prefacing the conversation with their parents that they had been there with their friends the week before.

Cadzow (2004) argues that there has been an epidemic of depression among children. She attributes this to children taking on board their parent's apprehensions about the state of the world. She also believes that when children are driven everywhere "they don't actually know what's out there". If parents shield their children, they don't have the opportunity to build resilience and are unable to develop the resources and understanding of how to deal with unpredictable events which are part of everyday life (Thom et al, 2007:1).

As a society we need to embrace a philosophy of resilience by valuing our children's ability to recover from adverse outcomes such as accidents, injuries, failure, conflict, abuse, neglect or tragedy (Gill, 2007: 93). Children need to develop their own coping mechanisms and to devise strategies to do things in their own way. It is only through "the doing" that children become competent in negotiating a vast range of interactions and relationships, including how to respond to peer pressures as well as decisions about who to trust and the extent of that trust (Gill, 2008:138). Finally, Hillman et al (1990:80) suggest that by denying children the opportunity to become independent in their early years, they will remain dependent longer than would otherwise be the case.

Capable and competent children

The *United Nations Convention on the Rights of the Child* defines children as 'individuals with inalienable rights of no less value than those of adults', and embodies the principle that 'the lives and normal development of children should have first call on society's concerns and capacities'. (Ratified in 1990 by the UN General Assembly) (Hillman et al, 1990:111).

Children and young people do not ordinarily inhabit civic or political spheres. The political establishment rarely seeks their views and they have little or no opportunity to participate in agenda setting. Again this harks back to the notion that children are seen as pre-social and are therefore unable to articulate a set of coherent political views. Children's lack of status rules them out of being viewed as fully social which is not only a precondition of citizenship but a requisite for political participation (Wyness et al, 2004:p81-83, Tisdall & Bell, 2006: 106).

Research indicates that young children can tell adults much about their daily lives and what makes them feel that their needs and opinions are valued. However, allowing children to participate in public life requires adults to rethink their assumptions about children's capacities (Lansdown, 2006:153, Gallagher, 2006: 160). When children are consulted they are more likely to support initiatives that they have helped to create (MacNaughton et al, 2007:459). A review of the literature indicates that researchers are more likely to survey parents to identify barriers to children's independent mobility. Only a few make a point of consulting with both parents and children. Where children have been consulted the evidence suggests that they have an extensive knowledge of their local areas, including safe and unsafe places.

Gender differences

The gender of the child is important when considering children's independent mobility. The literature suggests that the gender difference in free access to public space begins at an early age. Research indicates that boys are more likely to be given the freedom to travel without adult supervision earlier than girls (Whitzman, 2007:11). Gill (2007:14) notes that within some ethnic communities, girls and young women tend to be more protected and are not allowed access to public space without adult supervision. Morrow (2006: 96) highlights differences between boys and girls in relation to going out alone. Where boys aged 10 to 14 years mentioned traffic, girls were more likely to state fear of attacks, strangers and gangs. Younger girls felt safer in places that were monitored by adults. Similarly, parents were more protective of daughters because of a perceived fear of abduction or assault – both of which are not reflected in actual crime statistics. Lupton and Tulloch (1999:521) argue that it is too simplistic to label people's reaction to crime as being either rational or irrational. Rather, perceptions about crime operate at a number of different levels of meaning and consciousness which emerge from people's reaction to their own personal experiences, knowledge about others' experiences, information from the media and how all of these factors meld with discourses about how society is today.

Timperio et al (2004) surveyed two groups of children and their parents about perceived dangers in their local environment. The children were aged 5 to 6 years and 10 to 12 year olds. Parents and children who participated in this study were recruited from nineteen Melbourne state schools in both high and low socioeconomic areas. A comparative analysis of the data was undertaken which looked at the child's age, gender and socio-economic status. The study found that safety concerns were more apparent among girls than boys from both age groups. Likewise, parents of younger children and girls were more likely to identify stranger danger and road safety as barriers to walking and cycling in their neighbourhood. The authors found that there were no differences in frequency of walking or cycling to specific destinations according to SES among 5 to 6 year old girls. For 5 to 6 year old boys, those with high SES background walked or cycled to parks, ovals or playground and to school more often than boys with medium SES. Frequency of walking or cycling to friend's houses was highest among 5 to 6 year old boys with the lowest SES. Boys and girls aged 10 to 12 years from high SES were more likely to walk or cycle to school than children of the same age from lower SES.

Hillman et al (1990: 30) also found differences between girls and boys in relation to independent mobility patterns. Girls had less spatial freedom because of parental concerns about stranger danger and molestation, but were seen as more sensible, responsible and able to manage their own safety. Boys were more likely to display characteristics which could put their safety at risk, such as, being easily led and making irrational decisions. Barton & Schwebel (2007: 2) argue that simply being male can be a risk factor for pedestrian injury. First, boys tend to be more impulsive, which manifests in behaviour that could lead to unintentional injury. Second, boys are more likely

to than girls to repeat risky behaviour and attribute injuries to bad luck. Third, the way in which gender roles are assigned through socialisation can influence the risk of being injured as a pedestrian. Boys are expected and permitted to take greater risks than girls.

Valentine (1997:78) found in her discussions with children about stranger danger that both genders had a strong sense of invulnerability. While the boys had a strong sense of their own efficacy in terms of negotiating their neighbourhoods, girls were more likely to gain confidence from their friends as well as knowing people and safe places to go. Similarly, Pain (2006: 236) found that girls tend to be more sensitive and concerned about incidents occurring in their local area, while boys were more concerned about distant places with dangerous reputations (Pain, 2006:236).

The implications for these gender differences for active transport approaches are to ensure that both girls and boys are given an equal opportunity to learn how to negotiate their neighbourhood and are able to get to and from school without adult supervision. It is about moving beyond gender stereotypes that girls need more protection than boys. Both boys and girls should be given the opportunity to competently negotiate their public spaces because in the long term both sexes benefit from the independence and resilience it engenders.

Barriers to independent mobility

Research indicates that there are essentially two broad categories of barriers to children's independent mobility. The first are social and cultural barriers which include time poor parents, peer pressure from other parents and the over-scheduling of children with extra curricular activities outside school hours. The second are, physical and environmental barriers which include fear of death and injury to child pedestrians by motor vehicle crashes as well barriers in local neighbourhoods.

Time poor parents

Whitzman (2007:41) undertook extensive interviews with key stakeholders including Victorian State government departments, local government, health promotion organisations, peak bodies and academic researchers to identify barriers to children travelling independently. Her findings indicate that time is one of the major constraints to independent mobility. In many families both parents are in paid employment which means less time to walk or cycle with children to and from school. There is a perception that it is quicker and easier to drop their children to school in the car on the way to paid employment. However, as noted below this may not be the case due to the large amount of congestion around schools.

Dowling (2000) looked at car use among mothers in suburban Sydney. Among the women who participated in the study having access to a car was important because it provided them with increased flexibility. Dowling cites research which indicates that women tend to do more 'child-serving' travel than men. Many women juggle paid work, domestic responsibilities and ferrying their children from one activity to another. As a result, time is scarce as they attend to a myriad of pursuits and co-ordinate family member schedules. The lack of time has bolstered car use in many people's lives as cars are seen as quicker than other transport modes. Respondents in this study viewed public transport as being inappropriate for women with children, particularly in view of the logistics of getting on and off buses and trains with young children. Infrequent and unreliable service, as well as the difficulty of traversing across and between suburbs on public transport, was highlighted. Driving their children ensured peace of mind among the women in this study as nearly all held the view that Sydney was an unsafe place to live, especially for children. One interesting finding from Dowling's study was the view that travelling to and from places in the car actually facilitated 'family time' allowing family members to communicate with one another.

Descartes et al (2007) argue that car usage is tied to class-based ideologies around parenting and childhood. This ethnographic study looked at the link between community values and chauffeuring among middle class families in a small south eastern Michigan town. Parents in this community spent a large amount of time driving their children to and from extracurricular activities. There was a widely held belief that these activities provided their children with

'appropriate cultural capital' which would enhance their school performance and increase the likelihood of them attending college. Performing child transportation was also perceived as being a key criterion of good mothering.

Many parents have become self-appointed chauffeurs to their children. The issue of safety is tied up with the need to deliver children safely to their required destination. Yet, if children were able to get to and from school independently it would mitigate the need for parents to co-ordinate drop-off and pick-up times. It would also mean one less activity that parents would need to schedule and co-ordinate for the day.

Another advantage of active transport among children is that it is likely to reduce car congestion around schools making it safer for children. The large number of cars parked near a school at the beginning and end of each school day also impacts on the amenity of the local neighbourhood and nearby streets. For people living near schools access to their homes at these times can be problematic. Further, the sheer volume of traffic and erratic driving behaviour of some parents makes the streets around schools dangerous places for children (McMillan, 2005:441).

By encouraging active transport and reducing the number of cars around schools discernable decreases in green house gas emissions can be measured. In terms of long term behavioural patterns, McMillan (2005) argues that the children who do the majority of their travelling by car while growing up may continue that behaviour into adulthood and are more likely to have an aversion to travel by alternative transportation modes.

Peer pressure and parental conformity

One of the biggest barriers to children's independent mobility is the peer pressure exerted on parents by other parents. This sentiment is summed up by sociologist Frank Furedi who is the author of *Paranoid Parenting* (2001). He argues that:

'Parents are almost forced to fall in line... The minority of parents who try to resist are stigmatised as irresponsible. When your own kid is the only one allowed to go shopping, to go to the swimming pool by himself, it looks very strange'. (cited in Gill, 2007: 63)

Although many parents understand the need for and actively encourage independent mobility, unless there is a collective response this decision will be undermined by the negative responses of other parents. Essentially, no parent wants to be the first to let their child roam freely.

Veitch et al (2006: 384–388) undertook a qualitative study of 78 parents from a selection of five primary school populations in outer urban Melbourne. Face-to-face interviews were conducted to examine the range of activities and types of free play children were involved in outside school hours. Comparisons were made across socio-economic status (SES) areas; there

were 20 parents from high SES, 35 mid SES areas and 23 low SES. Parents were asked where their children usually played in their free time after school or on weekends and whether they allowed their child to go to places in their neighbourhood. The most frequent response was the child's backyard. One third said on the street or in a public open space such as a park or playground.

The main barriers to children playing outside their own backyard were perceived to be strangers, teenagers/gangs and road traffic en route to the play area. These problems were more likely to be identified by parents from low or medium SES. However, SES did not appear to be a factor which influenced the level of independence granted to children by their parents. All participants in this study who lived in a court or cul-de-sac stated that they allowed their child to play on the court regularly because it was a 'safe' place. Parents reported a strong community-oriented network between neighbours and children

Generally speaking, social norms shaped parents' decisions to allow their children to play in the street. These norms were largely defined by the perceptions of other parents about appropriate levels of independence extended to children. Where disapproval from other parents was strong, parents were reluctant to allow their children the freedom to explore their neighbourhood. Greater freedom was given to children aged 9 to 10 years. Children in this age group were allowed to visit parks or cycle to a friend's house without adult supervision. Surprisingly, owning a dog provided a child with a higher level of independence. Children were allowed to take the dog for a walk to the park or neighbouring streets. In some instances the only time the child was allowed to walk around nearby streets without adult supervision, was when they were walking the dog (Vietch et al, 2006). Presumably walking the dog offers some protection or legitimacy for the child to be on the street.

Over scheduling children's lives

In recent times there has been a trend particularly among those from middle to high SES to heavily schedule children's lives with music or dance lessons, receiving tutoring or playing sport. This trend has been exemplified by the ways in which children's social lives are structured. Birthday parties in the backyard have been overshadowed by expensive themed parties. Children tend to spend time together only when it is orchestrated by their parents as "play dates".

The ability of children to "hang out" and explore their neighbourhoods has been curtailed because children have less free time and much of their leisure time is focussed around playing inside. In the past adults in local neighbourhoods would provide passive/informal surveillance for children playing on local neighbourhood streets. Now children are involved in formalised play where parents are obliged to be "on duty" and to exercise control. This is most evident on weekends, when children are driven to sporting fields for adult-organised sport or play (Tranter & Doyle, 1996).

Hillman et al (1990: 81) found in their study that children's lives are heavily supervised and monitored around the clock, at home, at school and on weekends. An adult usually accompanies a child to school, they are then passed into the control of their teachers, after school they are picked up and taken to approved places, rather than being allowed to go to locations of their own choosing. The authors note that this loss of independent mobility has usually been replaced with other activities.

There is mounting evidence to suggest that parents are actually doing their children a disservice by filling every spare minute of their children's time. There is a tendency to give children every opportunity when what children need is to just be. This over scheduling of children's lives means that they are not given the opportunity to explore the world for themselves. Children aged 7 to 12 years enjoy the opportunity to have time away from adults. Not only is it good for their emotional and intellectual development but it provides them with the opportunity to socialise with other children and explore their local area (Gill, 2007).

Children's competency to negotiate traffic and cross the road

Estimates vary considerably about the number of children in Victoria and Australia who either walk or cycle to primary school. However, the research data shows a consistent trend where there has been a steady decline in the number of students getting to and from school via active transport. At the present time the vast majority of children are driven to school.

Hillman et al (1990:42) conducted one of the first studies to document the decline in children's independent mobility. The authors found that in 1971, 80 per cent of 7 to 8 year olds in the UK were allowed to travel to school on their own, but in 1990, this had fallen to only 9 per cent.

According to Australian data, the decline in active transport among children has come at a high cost. The increased traffic on the road, particularly in and around schools, means that children as pedestrians are at greater risk than ever before. Approximately 14 per cent of road fatalities involve pedestrians. In 2006, 227 pedestrians were killed and over 2,500 were seriously injured. Children under 16 years of age made up a substantial proportion of these deaths (13 per cent) and a larger proportion of serious injuries (21 per cent). Further, research indicates that children aged between 6 and 10 years are at the highest risk of death or injury in pedestrian crashes (Oxley et al, 2007).

I argue here that children of primary school age have the capacity to get to and from school and around their local neighbour independently using active transport. However, this is largely dependent upon their level of competency in relation to negotiating traffic and crossing roads.

Barton & Schwebel (2007) undertook a study which explored children's cognitive ability to safely cross the road. The authors started with the premise

that children in middle childhood, especially those aged 5 and 6 years, are not cognitively capable of handling the multiple tasks required for safe pedestrian behaviour. To cross a street safely, children must be able to:

- identify safe crossing gaps in traffic;
- assess the acceleration/deceleration of motor vehicles;
- judge the distance of moving vehicles in at least two directions;
- judge the speed with which they will need to safely cross a particular stretch of roadway;
- deal with visual impediments such as parked cars, bushes, curves and inclines in the road.

This study compared the aptitude of three separate age groups to deal with the multiple cognitive demands of safe pedestrian behaviour and ultimately cross the road safely. They were children aged 5 and 6 years, children aged 7 and 8 years and adults. Ninety-one children aged 5 to 8 years from a broad range of backgrounds were recruited. More than half (53 per cent) were male and 47 per cent were female. To test the efficacy of children crossing the road, the researchers set up a pretend crossing with the same dimensions as an actual pedestrian crossing. This simulated crossing allowed the researchers to observe the children in a real life context, where their decisions to cross the road could be observed, but without the fear of risk or injury.

Traffic on the road being observed travelled between 40 to 55 kilometres an hour. Those participating in the study were asked to watch the real traffic and cross the road five times on the adjoining simulated crossing with no supervision, visual supervision, partial supervision and full supervision. In total participants crossed the road 20 times.

The results showed that younger children performed less safely than older children. In terms of gender differences, girls waited longer than boys and tended to take into account the movement of traffic more than boys. Boys missed fewer opportunities to cross than girls. Overall, the boys tended to behave in a riskier manner when crossing the pretend road than girls.

Five and 6 year old children were more likely to display the most dangerous pedestrian behaviours on the pretend road. Compared to 7 and 8 year olds, younger children took more risks and had more close calls that might have resulted in a collision.

The authors argue that this is due to the fact that younger children find it more difficult to focus on multiple parts of a problem, whereas older children have better capacity to integrate information from a range of sources to handle pedestrian crossings. This means that younger children may be able to focus only on the distance of an oncoming vehicle, while older children and adults can simultaneously judge the speed, distance and acceleration of multiple vehicles, from all directions.

Interestingly, the most consistent finding in this study was increased risk-taking when children were fully supervised. This was attributed to the fact that

parents and not children decided when to cross in the full supervision condition. This means that children are at greatest risk from unintentional injury when being supervised by an adult. The authors concluded that 5 to 6 year olds lack the cognitive complexity to become safe pedestrians, while 7 to 8 year olds are more likely to be capable of handling the complexities of pedestrian safety. Further, parents need to monitor their children's pedestrian behaviours through teaching, modelling and intervention to prevent injury.

A study undertaken by Oxely et al (2007) had a similar objective to the one described above. The researchers wanted to gauge how well children aged 6 to 10 years were able to cross the road. Using a computer simulator to mimic traffic travelling 40, 60 and 80 kilometres per hour, children were required to indicate whether they would cross or not. The results show that approximately 60 per cent of participants from all age groups indicated that they would have crossed the road when it was safe to do so. Younger children were more likely than older children to indicate that they would have crossed when it was less safe. Six year old children were twelve times more likely to make an incorrect decision than 10 year old children.

Lupton & Bailey (2007) undertook a qualitative study of children aged 8 to 15 years in the UK. In total 12 schools were selected to be part of the study, six inner city schools and six rural schools. Six were junior schools and six were secondary schools. The schools were chosen because they provided a diverse range of traffic conditions and socio-economic backgrounds. A total of 122 interviews were conducted.

The children wanted the independence to travel to and from school without adult supervision. Some children were allowed virtually no freedom due to parental concerns, while some older children were allowed to travel without adult supervision to most places. Mobility generally increased with age and boys were often allowed more freedom than girls. Independent mobility appeared to be continuously reviewed with new boundaries actively being pushed and redefined by the children. Some children were allowed to travel without an adult if they were accompanied by an older sibling, but most children wanted to travel with a friend of their own age and preferred not to travel alone.

The children were asked to reflect on occasions when they might feel at risk or put themselves at risk on the road. On the whole, they said that they were more likely to be distracted and at risk in the company of other children. A number of children recounted situations where they were engrossed in conversation, or were in a hurry to join friends on the other side of the road. Some children recalled circumstances where other children had encouraged them to take undue risks and as a result, they preferred to cross the road alone. Children in this study were also able to identify problem drivers and complained about young male drivers and drivers who were impatient or careless or drivers who failed to stop at pedestrian crossings. The conclusion that some children reached about drivers who failed to stop was that they thought children were unimportant, or that they were unable to see children because they were too small. Some of the children who were interviewed in

this study were able to readily identify particular types of dangerous drivers for example “hoon drivers” who drive too fast and play loud music.

Physical, environmental and social barriers

There have been a number of studies (Gill, 2008, Mackett et al, 2007, Malone, (2007), Prezza et al (2006), Timperio et al 2004, Valentine, 1997, Whitzman, 2007, Ziviani et al, 2004), which identify physical, social and environmental barriers to children’s independent mobility. These barriers can pose a hazard for children moving freely through public space or are seen as posing a risk to the safety of children as they move from point A to point B.

Physical barriers in the built environment include roads, pedestrian crossings, footpaths, lack of street lighting, lots of cars parked on the street, the lack of bike lanes, large volume of traffic, the width of the roadway and footpaths, absence of footpaths, the lack of places to safely leave a bike, the cleanliness of air and noise pollution and so on. Children tend to have a high awareness of environmental issues from the built environment and the impact green house gas emissions have, not only on the local environment, but the planet as a whole.

The ways new suburbs have been designed can present physical barriers getting to and from places. New housing estates on the urban fringe are often designed as cul de sacs which decreases the connectivity between one destination and another because there is no direct route. Neighbourhoods with high connectivity are more likely to have streets laid out in grids, high street densities, high intersection densities and relatively few cul-de-sacs (Ziviani, 2004:9, Falb et al, 2007). From a safety perspective there is a perception among parents that courts are safer areas for children play while street grids with through traffic were seen as being unsafe for children to play (Vietch et al, 2006:390).

Environmental barriers are those which occur in the natural environment. These include the topography of an area (too many hills), and the weather conditions being too hot, cold or wet.

Social barriers include not only perceptions and values around active transport, but other personal barriers which might inhibit a child moving around independently. These include the perception that it is too far to walk or ride to school. It is generally accepted that children of primary school age should not walk any more than two kilometres (Ridgewell et al, 2005). Another social barrier is the belief that the route is boring, no other children walk or cycle in the area, active transport is not considered cool, children have too much to carry and/or their bags are too heavy to walk or cycle, fear of being bullied, teased or harassed, the area is deemed unsafe due to crime, fear of stray dogs, walking or cycling involves too much planning ahead and it is much easier to drive there on the way to something else.

Ultimately the decision rests with the parent as to how the child will get to and from school. Even though attempts may be made to address some of the physical or environmental barriers like widening footpaths or installing pedestrian crossings, parents may still be reluctant to allow their child to utilise active transport to get to school. McMillan (2005, 448-9) argues that a social marketing campaign may be required to inform parents about the benefits of active transport as opposed to the harms and risks. Further, parents may be required to model behaviours. Fit and active parents are more likely to be conscious of their child's health and well being.

Ziviani et al (2004) did a study in Brisbane of 164 Grade 1 to 7 students from a metropolitan state primary school. Apart from a major road on one boundary the remainder of street access routes were quiet and residential. The topography was relatively gentle without significant hills. Most students lived within a 5km radius. Parents were asked to identify factors that facilitated or hindered their child from walking to school. These included distance from school, parents' hours of work, traffic, school bag weight, footpath condition and pollution.

The authors found that there were two significant psychosocial factors which impacted upon whether children walked to school. These were whether parents had walked to school when they were young and whether both parents considered physical activity to be important. Parents also identified environmental factors such as traffic and distance from school as barriers to allowing their children to travel independently.

Achieving independent child mobility

Children's independent mobility can be viewed as a natural part of their development. It should be regarded like any other skill such as swimming or learning to ride a bicycle, as something that is taught and is undertaken incrementally. Some children can ride a bicycle as young as three, while for others they may not be proficient until they are six or seven years of age. Children learn new skills at different rates and ages. Romero (2007: 998) argues that the period between the ages of six and eleven years is a critical period in the development of self. It is a time when a child begins to feel more confident to navigate their neighbourhood without an adult. Therefore, the achievement of independent mobility should be assessed according to the capacity and maturity of each individual child. Yet, Oxley et al (2007) argue that there is little agreement among experts as to the most appropriate age to allow independent travel. Similarly, very little information is given to parents regarding the development of these skills.

One strategy offered by Gill (2008: 139) to increase active transport and independent mobility among children is for local government authorities to take a proactive role in improving the physical amenity of neighbourhoods where children reside. This would mean that public spaces would not only be easy to access but would also be welcoming to children and young people. Involving children and young people in the decision-making process is one way the local environment can benefit as well as strengthen children's sense of belonging to a locality. If children are disengaged from the from outdoor play facilities, they are less likely to use them (Beunderman et al 2007).

So what does an inclusive public space which is inviting for children look like? An ideal inclusive space is one that continues to be, produced and reproduced to reflect the various interests of all those who might wish to use that space. (Gallagher, 2006: 171).

Good public spaces for children can come in all different guises but they tend to have common features which:

- support active lifestyles
- support personal development and emotional wellbeing
- facilitate learning about wider society
- encourage positive attitudes to nature and sustainable development
- foster citizenship and participation in decision-making (Beunderman et al, 2007)

Another strategy to improve independent mobility is to ask children what they want. Wyness (2006: 2003) argues that we should be working with children rather than disregarding their opinions. Some researchers have actively sought the views of children when surveys have been conducted (for example TravelsSmart). Romero (2007) found in her study of 9 to 12 year olds who attended four state primary schools from Metropolitan Sydney that there are

tangible measures which can be implemented to enhance the quality and quantity of children's pedestrian patterns to and from school.

After consulting students through discussions, student's surveys and drawings, Romero revealed that independent mobility can be achieved through augmenting the neighbourhood with natural amenities, investing in neighbourhood diversity (including places where children can be physically active, to navigate and to hang out), and recognising the importance the physical, environmental and social barriers which may inhibit school/home journey.

Whitzman (2007) identifies four types of programs which can enhance children's independent mobility. These include traffic calming measures that reduce the volume and speed of cars, for example speed humps, raised pedestrian crossings and lower residential speed limits; and planning for walkability by making public spaces more child-friendly in terms of land use and design. The introduction of interim type measures such as walking school bus and school travel plans which aim to build both children and parents' confidence with the ultimate aim of allowing children to get to and from school independently. A summary of measures are listed below.

1. Traffic calming – which reduces the volume and speed of cars
2. Closing streets to through traffic particularly in residential areas
3. Invest in greater walking and cycling infrastructure
4. Planning for walkability and transit-oriented development – this means making public spaces more 'child friendly' in terms of land use and design.
5. Create home zones – which are streets shared by cars and pedestrians. Use of street planning to creates 'chicanes' or curves to promote alternate parking on opposite sides of the street. Not only do these home zones reduce road traffic accidents, they engender social interaction, reduce fear of crime and provide children with a safe recreational space close to home.
6. Walking school bus/school travel plans – The Walking School Bus can work to create some pre-conditions of independent mobility by decreasing local car traffic and increasing children and parents' confidence to negotiate their local area to and from school.

Successful interventions to promote active transport among children

Interventions to promote active transport and child independent mobility have been implemented at a number of different levels, including the community level, the individual child level and specific programs targeted at groups of primary school age children. As noted above, independent mobility is both culturally and context sensitive (Engwicht, www.lesstraffic.com). In some cultures such as Germany and Japan independent mobility among children is encouraged from an early age. As a residual effect, a whole of community ethos has developed in these two countries which actively looks out for children using public spaces.

The majority of children in Japan who are of primary school age attend public schools in their local school district. In large cities, school districts tend to be small and within easy walking distance from pupils' homes. In rural areas, even though school districts are much larger there is still a culture that encourages children to walk to school. Children usually walk to school independently, but where there are busy roads, parents and school employees may monitor pedestrian crossings. Japanese children employ a number of safety procedures on their route to school. To let drivers know they are crossing the road they may raise their hands or carry special flags at pedestrian crossings. Some younger school age children wear brightly coloured hats to make it easier for drivers to see them (web-japan.org/kidsweb/explore/schools/q5.html).

In some European cities such as the Netherlands, Germany and Denmark, authorities have adopted a two-tiered approach in residential streets to manage the flow of traffic. The first tier consists of 30 km/h residential zones and the second consists of streets with speed limits of 15kms/hr or even lower. Streets in the second tier zones are designated and clearly marked as areas where children play (Tranter & Doyle, 1996). A comparative study of German and English school children's travel patterns (cited in Tranter & Doyle, 1996) found that nearly a third of English children in the survey were collected from school by car – almost four times the proportion of the same age group of German children.

In terms of individual programs targeted at children, Oxley et al (2007) highlights that there is some evidence to suggest there is a dissonance between theory and practice around road education. On the one hand, children may receive the theory on road education but unless it is put into practice it is unlikely to improve safety and behaviour. Evidence from Oxley et al's research suggests that developing an awareness of traffic and learning fundamental road safety practices which is age appropriate should be undertaken under adult supervision. Once children are familiar with, and have had practice negotiating their neighbourhoods under supervision, they should be allowed to travel independently. The authors recommend a number of initiatives to improve child pedestrian safety including creating safe walking

environments, improving driver awareness of child pedestrian behaviour and pedestrian protection in vehicle design.

Specific programs to build capacity and enable children to make the transition from supervised travel to independent travel include Walking School Bus, TravelSmart and Streets Ahead which is a new initiative being supported by VicHealth.

The Walking School Bus aims to promote walking, reduce traffic congestion and pollution, promote street safety and the development of community relationships. Under adult supervision, children walk to school via a safe route. Walking School Bus was developed with the intention of getting children to walk to school, to improve their health via physical activity and ultimately as a mechanism whereby they make the transition to independent mobility. The Walking School Bus was also seen as an enabler to allow children to develop a relationship with their physical environment (Engwicht, www.lesstraffic.com).

The walking school bus is run by volunteer parents. Children walk on a set route much like a bus collecting children along the way and then delivering them safely to school. However, the administration of the walking school bus can be cumbersome. By the time volunteers are trained and police checks carried out, the attrition rate for volunteers is high (Whitzman, 2007:25). Engwicht argues that the Walking School Bus works best if it is on an informal basis where parents simply make a deal with each other to take it in turns, or one parent offers to walk the children. Ultimately the walking school bus should dissolve once parents think the children have the skills to make their own way. Although the Walking School Bus is cheap and easy to establish, evaluations indicate no decrease in local car traffic. Further, adults impose rules and surveillance on group travel which is contradictory to independent exploration. In a sense the Walking School Bus substitutes one sort of chauffeuring with another (Kearns et al, 2003).

The Walking school bus has been criticised by a number of researchers including Mayer Hillman. He believes it perpetuates the need for constant surveillance of children by parents. Further, the scheme does not challenge the views that streets are for cars and children are at risk in public space (cited in Tranter & Malone, 2003). The Walking School Bus is at best, “an ambivalent response to the hegemony of motorized transport” (Kearns et al, 2003).

TravelSmart – school travel plan, is a joint state and federal government initiative delivered locally through the Walking and Cycling Branch of the Victorian Department of Transport. Its focus is on reducing greenhouse gas emissions by decreasing people’s dependency on cars across and the adoption of more sustainable transport options (Whitzman, 2007: 35). The School Travel plan is designed to encourage more members of a school community to walk, cycle or use public transport for the school journey. TravelSmart starts from the premise that most children live within easy walking or cycling distance (3 kilometres or less) from their school. As

discussed above the majority of school students are driven to and from school. The preference for about two thirds of children in grades three to six is to walk or cycle to school. In addition to reducing greenhouse gas emissions, traffic congestion around schools and improving children's health, advocates of TravelSmart hope to improve social connectedness in local neighbourhoods. Although independent mobility is not a stated objective of TravelSmart the school travel plan may lead to greater independence by allowing children to walk or cycle to school (School Travel Planning Guide, www.travelsmart.vic.gov.au).

Whitzman (2007:36) argues that TravelSmart engages schools, parents and children in analysing their current travel behaviour. However, current evidence suggests that TravelSmart may not produce any long term changes in children getting to and from school.

DiPeitro & Hughes (2003) undertook an evaluation of the TravelSmart program. In order to bring about sustained change, the authors found that the whole school community needed to be involved. This includes school councils, administrators, teachers, students, parent/carers and other family members. Overall, the authors found that school communities positively responded to TravelSmart interventions.

Go for your Life is a Victorian government initiative which aims to promote healthy eating and physical activity. One of the initiatives under the *Go for your Life* banner is the Ride2School which aims at encouraging children to ride their bicycles to school. This program is being run in conjunction with Bicycle Victoria.

Garrard et al (2007:5) undertook an evaluation of the Ride2School program during March to June 2007. A student survey was given to 603 grade 4 to 6 students. The survey was distributed to a majority (80 percent) of schools which participated in the program. For comparative purpose the survey was also distributed to other schools (20 per cent) which did not participate in the program. This survey elicited a response rate of 35 per cent among parents and students.

Most students travelled by car; 44 per cent of students undertaking all trips to and from school in the car over the previous five school days, followed by 30 per cent walking and 14 per cent cycling, 6 per cent scootering/skating and 6 per cent using other modes such as public transport.

The most popular mode of transport was cycling: 80 per cent of children surveyed saying they either liked it or really liked it a lot. Walking (69 per cent) and scootering/skating (54 per cent) were also popular. Car travel was the least desirable mode of transport only 40 per cent of respondents reported they neither liked nor disliked this mode of transport. Ninety- five per cent of student owned a bicycle and 97 per cent could ride a bicycle. Most students who participated in the survey travelled with a parent or carer (69 per cent), followed by siblings (35per cent), friends (22 per cent) or alone (20 per cent).

The reasons for driving were:

- bad weather
- drop child off on way to work or other place
- concern about stranger danger/assault/abduction
- too far to walk/cycle
- driving is quicker than walking or cycle
- crossing roads is too dangerous.

Some of the barriers identified in other studies appeared to be less important to the respondents of this survey. These included carrying things to school, bicycle storage, traffic conditions and unfriendly dogs.

To make residential streets more child friendly, McMillan (2005: 442) has proposed reduced speed limits to decrease the likelihood of death if hit by a motor vehicle. The likelihood of death is about 5 per cent if someone is hit by a car travelling 30 kilometres an hour. This increases to 80 per cent at 60 kilometres per hour. Reduction in speed around school zones is good as long as drivers abide by the recommended speed limit and that speed limits are enforced.

A recent initiative announced by VicHealth is the Streets Ahead program. The aim of the program is to build on the successes of the Walking School bus to increase physical activity among children aged 4 to 12 years through active transport. One of the primary objectives is for local communities to work together. This program also aims to increase children's active transport to and from school and within their local community and promote independent mobility among older primary school aged children.

The program will be implemented by local governments and conducted jointly with a cluster of three or more primary schools with a critical mass of children aged 4 to 12 years living within a 2 to 3 kilometre radius of the school. Community engagement will be used to put the necessary support in place at the local and school level. Arguably this project will take into account the cultural context of specific local communities to allow the implementation of specific strategies and locally generated responses.

Environmental and sustainability concerns

One of the biggest barriers to walking and cycling is an entrenched preoccupation with cars. Car culture or car dependence is more than a mode of transport. It is an expression of personal and social status and for some, the ultimate in self expression. For many in the community alternative modes of active transport such as walking, cycling or public transport are perceived as less attractive choices. (Ridgewell et al, 2005: 8). Although perceptions around active transport and public transport may change as petrol becomes more expensive.

Dowling (2000) argues that private cars are important to women with children because of the increased flexibility they offer. For the women who participated in Dowling's study, the car was seen as a management tool, providing greater flexibility to co-ordinate complex daily routines. The car was seen as the quickest and most convenient way to get from point A to point B. There was a widely held perception among the respondents that public transport was too crowded, unreliable, with poor connectivity between suburbs. Most respondents were unwilling to double their travel time by using public transport. Implicit in these comments was the notion that these women had better things to do than waiting for a bus or travelling on a train. Further, there was a strongly held view that the motor vehicle was a way to combat social isolation. Ironically, if some of these women had opted for active transport they may have had the opportunity to meet new people in their local neighbourhoods.

In Victoria 17 per cent of early morning traffic on the roads is made up of cars doing the school run. This significantly adds to the congestion on the roads. The air quality around or near schools appears to be worse than in surrounding streets. This is due in part, to the emissions from cars as a result of short journeys (Whitzman, 2007, 15). It has also been argued that when children become adults they will not have the knowledge and confidence to travel by any other mode than by car (Ridgewell et al, 2005).

Paradoxically, the traffic congestion, pollution and safety issues associated with the extra traffic involved in transporting children to and from school means that our roads become increasingly dangerous. Ironically, parents who fear for the safety of their children often consciously choose the car as the safest option.

Ideally, if there were more children in the streets as pedestrians it would alleviate the impact of car culture in getting children to and from school. Not only is active transport among children good for the environment, the presence of children is also an effective way of breaking down the natural reserve between adults; streets become more interesting, more liveable and more communal places.

Benefits of active transport on physical and mental health

“As a general rule, too many Australian children are overweight because they don’t get the required half-hour of physical exercise each day. Driven to school, picked up from school, kept off the dangerous streets and away from the dangerous parks, they are the cotton wool generation and, often, the only physical exercise they get is when their parents have time to supervise”

(Powell, 2000 ‘One in Four Australian Children is Overweight. Slower, Stiffer, Heavier – They are the Cotton-wool Generation’, *The Weekend Australian*, 27–28 May, cited in Ridgewell et al, 2005).

There is mounting evidence to suggest that changing trends in travel modes may have deleterious effects on children’s physical and mental health. Childhood obesity is a growing concern and much of it can be attributed to lack of physical activity. In 1960, 5 per cent of children were overweight; in 2004 this had increased to 25 per cent (Whitzman, 2007, 12). Australian data suggests that between one-fifth and one-quarter of Australian children do not do enough exercise (Veitch et al, 2006: 383). Patterns of physical activity need to be established in childhood, because sedentary children are more likely to become sedentary adults. This inactivity can also lead to illnesses such as heart disease, diabetes, high blood pressure, obesity, and osteoporosis if continued into adulthood (Ridgewell et al, 2005: 9). Children and young people need at least 60 minutes of medium intensity physical activity each day. Play and informal recreation is one of the most effective ways to meet this target for children. Unstructured play ranked second in terms of calorific intensity and concluded that walking and playing provided children with more physical activity than most other activities. Unlike sport, play does not require significant levels of skill and is less centred on competition and winning (Beunderman et al 2007).

Children who walk or cycle to school have higher daily levels of physical activity and better cardiovascular fitness than do children who do not actively commute to school. According to a Youth Heart study, children and adolescents who cycled to school were nearly five times as likely to be in the top quartile for fitness as young people who walked or used motorised forms of transport (Davidson et al, 2008). Moreover, regular spontaneous contact in a neighbourhood builds up levels of familiarity and trust, making people feel better about their community (Walk to School, 2008).

Travelling to and from school using active transport is one way that children can gain regular exercise by either walking or cycling. A child who is unable to walk or cycle to school may have fewer opportunities for regular exercise, particularly if most of their recreational activities are indoors. As has been discussed above, children today are less likely than previous generations to spend time playing outdoors and getting around their neighbourhoods as they choose. Time outdoors is one of the most consistent predictors of children’s physical activity. Children’s active free-play or unstructured physical activity

that takes place in the child's free time is a major contributor to physical activity (Vietch et al, 2006). Playing outside and walking to and from school expends more kilojoules than organised sport and structured after-school activities (Mackett et al, 2004, Prezda et al, 2005). Even short walks to and from school have been found to have a positive effect on mood, reducing feelings of anger and anxiety (Walk to School, 2008).

Restrictions on free play not only threaten a child's physical health and immune function, but also their mental health. Children whose lives are too controlled may not have the chance to learn key life skills that are best acquired, through self-directed play (Gill, 2008:137). Many children yearn for free time away from the prying eyes of adults (Gill, 2007). Active transport for children is not just about getting from point A to point B, it's a chance for kids to "kick stones, pat the dog, dawdle with friends, build play houses and forts, dig the ground and swap notes about the old lady who lives in the spooky house on the corner" (Cadzow, 2004). For parents concerned about the safety aspects of allowing children to play freely and without supervision, the health and developmental benefits significantly outweigh the risks (Gill, 2007: 16).

Conclusions

Since the 1970s there has been a steady decline in active transport among Australian children (van der Ploeg, 2008). If given the choice, children would prefer to walk or cycle to school and to other locations. Yet, children tend to be driven everywhere.

Organisations such as VicRoads and the Pedestrian Council of Australia advocate that children as old as 10 or 11 years should be accompanied by an adult when walking or cycling to school. Yet as research cited in this report has shown children are not a homogenous collective; they develop at different rates and have different abilities. To make blanket statements about the capacity of all children within a particular age cohort is misleading and could potentially be doing more harm than good. With the right support children can be taught road safety so that they can negotiate traffic conditions with safety and ease and therefore use active transport to travel independently to school.

There is mounting evidence that autonomous exploration of local environments is an important part of the social and mental development of children. Children want the opportunity to play everywhere, in the streets, in the park, in rivers, creeks and swamps, in the far reaches of their school yard. Children have a need and a desire to carve out a sense of belonging where they can be alone and discover themselves.

Independent child mobility is not only good for mental health and wellbeing it is also good for physical health. The recent increase in childhood obesity can be attributed to high energy foods but also to insufficient physical activity. Children are able to increase their level of physical activity through active transport which uses more kilojoules than organised sport or activities outside school hours.

Most parents start with the laudable intention to do the best for their kids but end up going too far. However, there is enormous social and cultural pressure placed on parents to constantly supervise and micromanage their children. The term “helicopter parents” epitomises the way in which middle class parents in particular hover over their children and organise all aspects of their lives.

It is up to the whole community to embrace and encourage active transport among children. As a community we need to regain the free-range childhood we experienced a generation ago. Currently, our hot-housed children are denied a sense of self efficacy which is taken for granted by adults.

Gill (2008:139) argues that as a community we need to strike a balance between protection and freedom with the aim of building children’s resilience. He believes this could be done by fostering a shared responsibility by the whole community for children’s wellbeing and welfare. Putnam (2000: 408) believes that unless people actively demand change in terms of reclaiming and moving freely through public spaces, then nothing will change. This

means that neighbourhoods and streetscapes should be designed to allow children and their parents to feel comfortable roaming the streets unaccompanied by an adult.

Ironically, because many children are not given the opportunity and freedom to negotiate their neighbourhoods and travel independently to school, by the time they reach an age where they are expected to be independent, they have not learnt street skills and are more vulnerable to stranger-dangers.

Ross (2007) provides a good example of how a whole community supports children using active transport to get to and from school. Her study in Fife Scotland indicated that it was common practice for children in the middle years of childhood, to negotiate school journeys independently. Even when parents had access to a car, active transport was the preferred mode of getting to school. Parents in this study placed a high priority on their child developing autonomy; they viewed getting to and from school as a means through which children acquired responsibility, developed time and risk management skills and independent decision making. They were also aware of the social and health benefits of active transport. School journeys were highly visible in the community, where the whole community looked out for their children. It was acceptable practice within this community for children to negotiate school journeys independently.

Childhood in our postmodern society is focussed on action, achievement and consumption. Yet is it somehow empty and devoid of meaning? What children miss out on are “the things that give texture and meaning to their lives. Small adventures, secret journeys, the setbacks and mishaps, the glorious anarchy, the moments of solitude and even the boredom.”

(Honore, C., 2008 extract from *Under Pressure*, cited in Sunday Life, *The Age*, 4 May)

Giving children back their freedom and autonomy through active transport and independent mobility is a valuable and significant way to allow children to reach their physical and mental potential. It is also an excellent way to invigorate local communities.

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