Children's freedoms and promoting the 'active city' in Auckland neighbourhoods

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ABSTRACT

Daily life in the larger urban centres of Australia and New Zealand is becoming increasingly stressed though influences ranging from traffic congestion, pollution, and loss of green space. Arguably these influences have the greatest impact on children whose lives are most prone to, respectively, injury, contamination, and constrained play space. Further, the very design of neighbourhoods can be enabling or constraining to children's activity. Notions of the 'active city' are therefore central to the future of our cities and involve a commitment to achieving a balanced suite of transport modes.

In such an urban form and structure, active forms of mobility such as walking and cycling are privileged in order to promote sustainability and physical activity. These most basic forms of transport have become increasingly marginalised in our cities as traffic congestion has driven walkers from the streets and which, in turn, is exacerbating a reliance on the private motor vehicle for everyday activities such as getting children to and from school.

This paper presents a framework through which to critically reflect on the links between people, place and wellbeing at the neighbourhood level. It then refers to a case study from Auckland, New Zealand, that focuses on the welfare of children and asks the question: does geography matter in the influence of neighbourhood on children's health? This work examines one means of revalidating walking and breaking car dependence: the 'walking school bus' (WSB). This concept involves volunteers accompanying children along set routes and at set times. The paper reports on a survey of Auckland's WSB programme conducted in 2004. Results showed that 1519 primary-aged children are registered for WSBs in the Auckland region and an estimated 1070 car journeys are saved on an average day through the operation of 104 routes.

The main benefit of WSBs, as perceived by parent coordinators, was exercise for children, followed by the social aspects of participation. We conclude that considering WSBs in terms of their capacity to address issues such as traffic de-congestion, the promotion of physical activity and injury prevention potentially fragments an assessment of their benefits. Rather, a holistic urban public health perspective sees the sum as greater than its parts. From the perspective of participants, walking and talking go hand-in-hand and the chatter of a WSB in action speaks to the heightened community cohesion that results when parents break the cycle of chauffeuring children between home and school.

Despite their successes and benefits, however, WSBs operate through a measure of control and surveillance. They cannot be relied upon to address broader planning challenges such as shifting the priorities of the urban political system towards considering children and promoting walking more generally. The latter part of the paper therefore examines children's perspectives on the planning

process and priorities drawn from a 2004 study involving children from three Auckland primary schools. We conclude that there is the capacity to take children seriously as contributors to, rather than obstacles within, the planning process. Ideas of the 'active city' warrant serious consideration for their capacity to make space for difference and re-embrace the links between people, place and wellbeing at the neighbourhood level.

INTRODUCTION

Historically, the rise of the automobile has been paralleled by a decrease in walking in most Western countries. The growth of cities, the emergence of motorways, wider roads, suburbanisation, and land use zoning have resulted in low density urban sprawl and automobile dependency, with a consequent decline in public transit, walking and cycling. Our environments are increasing built not on a human scale, but rather one designed for automobiles (Solnit 2000). Most contemporary cities are less *walkable* than urban areas which were built before the widespread use of vehicles (Tolley 2003; Newman 2003).

In the larger cities of Australia and New Zealand, backyards, and green spaces are increasingly being filled-in and paved-over in response to population growth, demand for higher-density housing, and an awareness of the costs of sprawl. In combination with under-developed public transport networks, one consequence of these shifts is a marked increase in traffic volumes and congestion, a trend which has contributed to parental fears for children's safety in public space, as well as to chauffeuring behaviour (Kearns and Collins, 2005). In combination, these changes appear to have further reduced opportunities for walking as a form of mundane mobility.

In this paper, we consider the potential for walking to occupy a more prominent place as a form of quotidian mobility in Australian and New Zealand cities. We then review, and present new data on, walking school buses (WSBs) in Auckland as one intervention that has ostensibly enhanced children's freedoms and relegitimated this banal, yet energy efficient, contribution to the 'active city' (Low, 2003).

Land Transport New Zealand defines 'walkability' as "the extent to which walking is a readily available, safe, connected, accessible and pleasant mode of transport." (Land Transport New Zealand, 2004). This includes taking into account the natural and built environment in cities, the connectivity and distance between trip origins and destinations, the level of mixed land use in an area, and also connections to public transport. In addition walkability encompasses the impact of other road users which may detract from the pleasantness of walking, the pedestrian infrastructure such as footpaths, road crossings, benches, rest areas and shade, and safety factors such as lighting, visibility, and numbers of other people around an area. We are interested in whether supportive and secure environments are effective in changing travel behaviour, specifically by effecting a shift from automobile dependence to walking. While there is relatively widespread acceptance of walking as a casual or recreational form of mobility, the ability to walk for transportation is determined by a combination of individual attitudes, the physical environment, and the social conditions that determine acceptability. Such complexity notwithstanding, there are social, environmental and health imperatives for promoting walking and walkable environments, as their absence from the city has been associated with social isolation and lack of accessibility to services, especially for younger and older people. The former group is a particular focus for this paper, consistent with our longstanding interest in children's mobility.

WALKING AND HEALTHY COMMUNITIES

In considering the potential benefits of walkability, particularly in urban areas, we refer to the dimensions of healthy communities implied by the *Te Pae Mahutonga* framework (Durie, 1999). Formulated as a model of the dimensions of health for Maori communities, it has subsequently been

applied and extended in the quest to conceptualise the health and well-being of broader populations within their physical and social environments (Kearns, McCreanor & Witten, 2006). Drawing on the Southern Cross star formation, it identifies four broad domains of health (*Te Pae Mahutonga*): a healthy community is one that promotes *mauriora* (secure cultural identity), *waiora* (environmental protection), *toiora* (healthly lifestyles) and *te oranga* (participation in society).

We contend that at least the last three of the foregoing dimensions could be enhanced through greater walkability. First, with respect to *waiora*, air and water quality are adversely affected by automobile use, frequently to the detriment of community health. For example, transport policies in the Auckland region have contributed to high levels of vehicle emissions (Kearns et al., 2005), which are linked to increases in respiratory related deaths (see Fisher *et al*., 2002). Second, the exercise associated with walking has the potential to benefit respiratory and cardiac health, and enable healthier lifestyles (*toiora*), particularly when it becomes routinized in the lives of individuals and the city more generally. Third, the opportunistic interactions that are possible when out and about 'on the street', or when engaging in more organised forms of walking such as the WSB, contribute to a third aspect of healthy communities: *te oranga*.

WHAT PROMOTES PEDESTRIAN ACTIVITY?

If it is accepted that walking as a form of routine mobility promotes healthy communities (through protecting the environment, encouraging healthy lifestyles, and promoting social participation), we must then ask what promotes pedestrian activity. In the modern era, the hegemonic view held that the key to a prosperous city lay in creating space for motor vehicles (Low, 2003). The limits of such thinking are increasingly well-known, however, and some contemporary planning discourses place greater emphasis on creating urban spaces that favour those travelling by foot, cycle and public transport. As the decline of walking has been linked to increases in traffic volumes and speeds, a lack of safe crossing opportunities, and poor footpaths (Goodman and Tolley, 2001), logic suggests that if cities are reorganized so as to deny primacy to the automobile (at least at key sites), *opportunities* for pedestrian activity will increase.

This said, attitudes have also been identified as key factors underlying travel preferences (Kitamura *et al.,* 1997; Lund, 2003; Giles-Corti and Donovan, 2003). The prioritization of the automobile has resulted in negative consequences for pedestrians – including unattractive public spaces, dangerous roads, and a neglect of pedestrian interests at the policy level (Sauter, 2003) – and this situation has encouraged negative perceptions of walking, and ultimately reduced levels of pedestrian activity. Walking (and walkers) are further marginalized by the prevalent view that car travel offers convenience, speed, comfort, individual freedom and an indication of economic status. The perceived benefits of car ownership and use are thought to be a significant contributor to automobile dependency (Diekstra and Kroon 2003). Kitamura *et al.* (1997) suggest that urban travel preferences are shaped by a combination of land-use and existing travel patterns. Thus, for instance, aesthetically pleasing neighbourhoods and good quality sidewalks may encourage walking, but are unlikely to realize significant modal shifts in and of themselves; the presence of other walkers (and/or cyclists) is also required to legitimate and encourage moves towards more active forms of mobility. The notion that modifications of urban form will, in themselves, bring about notable increases in pedestrian activity are further complicated by the sheer range of variables which influence people's willingness to walk, including socio-economic status, car ownership, household type, demographics, culture, having others to walk with, dog ownership, self control, rainfall, topography, darkness and perceptions of local environments.

Children's Independent Mobility

Children's opportunities for walking and other forms of independent mobility are typically constrained in contemporary urban environments, due in particular to parentally-imposed

limitations resulting from fear of both traffic and strangers. Many children – especially younger, primary-school aged children – have little or no input into the travel decisions affecting them, and are constrained in their ability to investigate alternatives to being chauffeured in parental vehicles (Kearns & Collins, 2006). While unable to drive themselves, children have limited access to public space for walking and cycling as a result of both risk-averse parenting cultures, and discursive and material constructions of public space as (variously) adult space, car space and development space. While it must be acknowledged that, for many children, increasing automobile use in cities increases their mobility (at least in terms of the ability of car-owning parents to cover large distances), it is mobility of a supervised and constrained form. Much of the literature laments the inability of children to explore their own environments in a way most children in Western societies did thirty years ago, and many authors point out the damaging consequences this may have for children's development (for a recent review, see Mitchell *et al.* 2006).

Children's marginal place in the public spaces of the city, and their loss of spatial freedoms, is an issue that has been extensively researched in recent years (Adams 1993; Hillman 1993; Rosenbaum 1993; O'Brien *et al.* 2000; Tranter and Pawson 2001; Timperio *et al.* 2004; Mullan 2003; Lam 2001; Black *et al.* 2001; Joshi and MacLean 1995; Joshi *et al.* 1999; Roberts and Norton 1994; Collins and Kearns 2001; Kearns *et al.* 2003). Some studies show that children are allowed more freedom on streets with lower levels of traffic, and that parental perceptions of risk are diminished in these environments (Lam 2001; Mullen 2003). It has also been acknowledged that large cities are viewed as unsafe, harsh, dangerous environments for children compared to smaller centres, and that children may be allowed more freedom in the latter (O'Brien *et al.* 2000). Some authors write that the withdrawal of children from streets can be partially explained by a legal and educational culture that tends to blame children who are involved in pedestrian accidents (Rosenbaum 1993; Roberts and Coggan, 1994; Ward 1978; Timperio *et al.* 2004). Other authors discuss the (in)competence of children to negotiate public space safely, with several finding that children are aware of traffic dangers and have well-developed knowledge of their local environments (Nayak 2003; Timperio *et al.* 2004; Joshi *et al.* 1999).

There is also a large literature linking children's inhibited access to public space (and hence freedom to roam and opportunity to walk) to their own and/or parents' fear of abduction, murder and sexual assault (Valentine 1996a; 1996b; 1997; Rosenbaum 1993; Hillman 1990; O'Brien *et al.* 2000; Pain 2001; Joshi and MacLean 1995; Black *et al.* 2001; Mullan 2003; Nayak 2003). Valentine (1996a; 1996b) argues that much of this fear is attributable to heightened media coverage of abductions which increase parental perceptions of risk. Even though statistics show that children are more likely to be abducted or abused by someone they know, and this is more likely to occur in the home than the street, the home is construed as a 'safe' space, and the street as a 'dangerous' space (Valentine 1996b). Some writers have argued that stranger danger is a more significant cause of parental decisions to decrease their child's mobility than traffic danger, with parents citing this as the most significant danger to their child (Joshi and MacLean 1995; Valentine 1996b).

The perception that the risks posed by traffic and strangers are both significant and increasing has led to a culture of parents (usually mothers) chauffeuring their children to and from school and scheduled after-school activities (O'Brien *et al.* 2000; Mullen 2003; Collins and Kearns 2001). These trends contribute to a broad 'retreat from the street' on the part of children, and to the privatization of their lives. Karsten (2002) observes that children continue to have a place in the city, but that this place is increasingly characterized by privatization, commercialization and institutionalization (e.g., private play spaces, clubs and childcare facilities). Her work also shows that there is a large degree of segregation of children (by socioeconomic status and ethnicity) as a result. Of particular interest to us in the present study, however, is the manner in which these processes contribute to the marginal status of walking, due to a vicious cycle in which increased car use decreases the safety and acceptability of alternatives, and thereby compels still greater car use.

Conversely, in Japan – where children over the age of six walk to school, and road signs warn "watch for children jumping out" – some streets have become a space shared by adult and child pedestrians alike (Joshi and MacLean, 1995). For walkers (and cyclists), a 'critical mass' may normalize their presence on the streets, and contribute to perceptions of safety.

Certainly, failure to take seriously the benefits of active travel comes at a price, particularly for children. Restrictions on children's independent mobility have been linked to poor environmental knowledge, less competence and confidence, and slower emotional development (Pain 2001; O'Brien *et al*., 2000; Hillman 1993). Physical development is also impaired due to a lack of active transportation such as walking and cycling (Pain 2001; Black *et al.* 2001; Hillman 1993). In addition, Tranter and Pawson (2001) suggest that continual automobile use during childhood fosters unsustainable habits which are likely be carried over into adulthood, with new generations not considering alternatives to automobile travel.

Given such concerns, most authors conclude that a child friendly city is one that includes more walking, cycling and public transport, and less automobile traffic (Hillman *et al.* 1990; Hillman 1993; Rosenbaum 1993; Ward 1978; O'Brien *et al.* 2000; Tranter and Pawson 2001; Joshi and MacLean 1995). But *where* should energies be focussed, if child pedestrians are to reclaim the streets? The conventional twentieth century view of Western cities held that dense central city areas were unsuitable for children, in contradistinction to middle-class suburbs and rural areas (both of which, not coincidentally, were associated with low traffic volumes). With the intensification of suburban life, and efforts to increase densities outside of traditional city centres, partly as a response to the problems associated with sprawl, suburbs appear to be less child-friendly than was once the case. As we argue in the following section, initiatives such as the WSB offer suburban children the chance to reclaim their neighbourhoods, albeit in a prescribed and constrained manner.

However, we do not wish to dismiss the inner city altogether. O'Brien (2003) suggests that cities such as London may be appreciated by children for their excitement, buzz, activity and availability, and the availability of public transport. Karsten (2003) argues that there is a new generation of young professional parents choosing to raise children in central Amsterdam, and that this location provides a rich social network and feeling of social safety for both children and their parents. However, she also acknowledges a shortage of safe places for children to play, and increased traffic danger. In a comparison of children's freedoms in Germany, Britain, Australia, and New Zealand, Tranter and Pawson (2001) found that German children had the greatest independent mobility. They linked this to higher urban densities, with facilities such as schools close to children's homes, better public transport, and a greater number of people on the street, as well as a sense of collective responsibility among German adults for children's well-being. In the New Zealand context, Nairn *et al.* (2003) challenge the urban/rural dichotomy as it relates to concepts of childhood, arguing that both urban and rural areas contain inclusionary and exclusionary spaces for children.

It appears that dense central city environments can include child-friendly environments, and offer children some opportunities for independent mobility, particularly when traffic speeds are low, and pedestrian counts high. This said, the 'suburban dream' – and the associated notion that the suburbs are 'the right/best place to bring up children' – continues to hold considerable currency in New Zealand and Australia. Accordingly, our focus in the Auckland context is on suburban neighbourhoods, and the role of walking school bus developments in enhancing children's access to public space, decreasing automobile dependence, and increasing the presence and legitimacy of pedestrians.

The Walkability of Auckland

Active travel has recently begun to receive political attention in Auckland, at both the regional and local levels, after decades of sustained focus on the private automobile and, to a much lesser extent,

public transport. The former of these transport options has been the clear beneficiary of the bulk of planning and funding activity, despite numerous plans for better bus and rail systems having been developed since the 1950s (Mees and Dodson, 2002). By contrast, walking and cycling were not mentioned in any Auckland regional transport document before 1987, and in the 1980s were generally only acknowledged as 'alternative' or 'slow' modes which are 'impractical' and strongly limited in terms of both acceptability and the distances that may be travelled (ARA 1987). It was not until the 1990s that walking and cycling began to be taken seriously, a position that has become formalised in the *Regional Walking Strategy* (2002), and similar documents developed by several constituent cities within metropolitan Auckland.

In addition, the 2005 (draft) *Regional Land Transport Strategy* allocates 4% of funding to travel demand management, and this involves the development of school, workplace and community travel plans, as well as focus on the walkability of neighbourhoods and cycling improvements. While this appears to be a positive step, it is worth bearing in mind that 61% of funding is still going to roads, and 35% to public transport (although the latter may promote walking through pedestrian activity en route to and from points of embarkation and disembarkation). The modest degree of institutional support for routine (i.e., non-recreational) walking is revealed when one notes that the goal is to increase walking from the current 15.1% of trips to 15.5% by 2016. While this figure apparently masks a 63% increase in walking and cycling trips within town centres, it appears to be a rather minimalist goal, particularly in light of pervasive sustainability and health rhetorics promoting the benefits of walking and cycling. Clearly, roading (and cars) remain the focus of the strategy, despite an acknowledgement that vehicle emissions will increase by 21% by 2016.

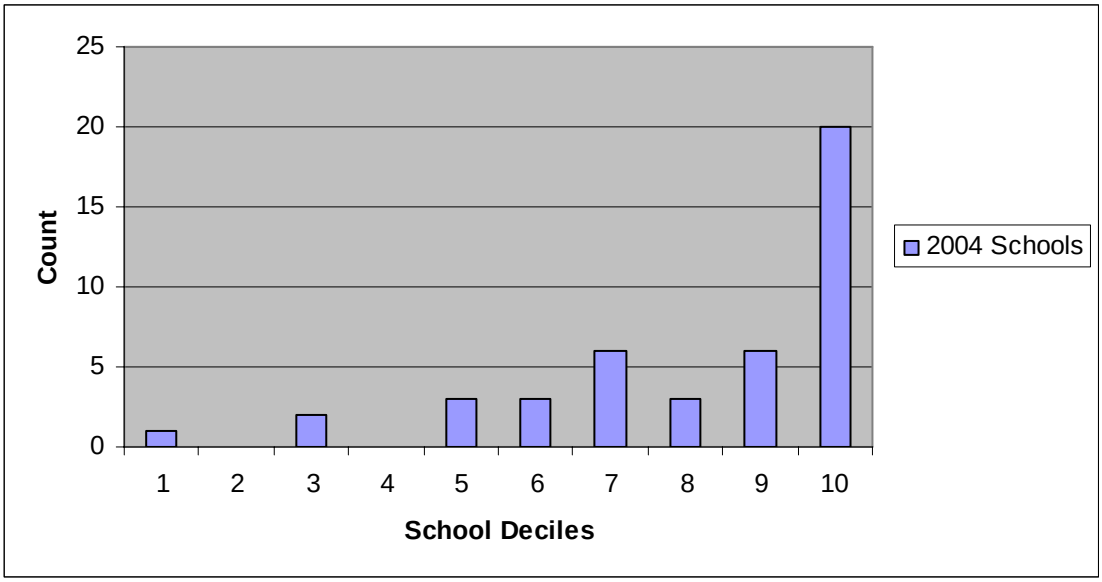
The walking school bus concept

The walking school bus concept, formulated by Engwicht (1992), involves groups of children travelling to and from school under adult supervision, and is dependent on reliable staffing and scheduling. Like their motorised counterparts, WSBs follow timetables, stop only at designated points, and operate year-round. After the first Auckland route was established in 2000 (Kearns et al, 2003), local authority support propelled uptake such that over 70 schools now run schemes. WSBs have been perceived as empowering, offering significant benefits in the areas of sociability, safety, and physical exercise, as well as traffic reduction (Kearns et al., 2003). While such initiatives can lead young people to find a voice and express agency, they can also be a form of social control. For all that WSBs may offer children a desirable alternative to car travel, they are dependent upon parental support and surveillance, are subject to adult-imposed rules (Kearns and Collins, 2003). However in the car-dominated city, their presence can be a turning point in bestowing some constrained agency upon children and re-legitimating the place of walking within the range of ordinary forms of routine mobility.

The Auckland WSB case study

Our case study is based on an evaluation undertaken in November, 2004 (Kearns and Collins, 2005), by means of a self-completion questionnaire sent to the coordinators of all WSBs in the Auckland region. An incentive to complete was a $200 contribution towards ongoing funding for the WSB by the Auckland Regional Transport Authority (ARTA). Data were collected and collated by ARTA staff and supplied to the authors in February, 2005. Responses were received from 44 schools. These provided information on 89 WSB routes. Of these, 16 (18%) were established during the foregoing 12 months. As Figure 1 illustrates, our sample reflected an established trend for WSB initiatives to be concentrated among schools in high socio-economic status neighbourhoods ('high-decile' schools in New Zealand educational parlance).

Figure 1: Surveyed Schools by 2004 Decile



The 44 schools for which data was obtained operate a total of 104 routes (although data was provided for only 89 routes). This average of 2.3 routes per school masks a considerable range: 11 schools operate only one route, whereas one school operates six. The average length of a single WSB journey was reported as being 20 minutes. Our survey data revealed that there were 1519 children registered for WSBs in the Auckland region. This number is based on information provided by representatives of 82 routes – an average of 18.5 registered children per route. There was considerable variation between routes, with one having 100 registered children, and two having just 6 registered users each.

Respondents reported a total of 750 volunteers assisting with WSB operations, representing one adult volunteer for every two registered children. WSB initiatives in Auckland have received various forms of financial and administrative support from local and regional government (including $1500 establishment grants offered by Infrastructure Auckland), as well as support from many schools in establishing and maintaining routes. This ongoing volunteer support, combined with funding from public agencies to cover expenses, provides a supportive context within which WSBs are able to thrive. Almost all WSBs offer regular participants some form of reward to encourage loyalty and recognise the distances travelled. In the present sample, all but two schools reported having a reward system (e.g. a bus ticket system for recording the number of journeys undertaken by each child. Once a certain number of journeys are completed, children receive a prize, such as stickers, bag tags, or certificates).

The survey invited respondents to list what they perceived to be the three most important benefits of their WSB route (in order of importance). To assess the relative significance of the aspects identified, respondents' first, second and third choices were attributed weights, enabling a ranking table to be produced (see Table 1). This data reveals the value that WSB coordinators place on the exercise (and perceived health benefits) children receive from walking, although the social elements of WSB activities are also considered to be significant. Overall, these benefits are perceived to be more important than injury prevention and traffic reduction – outcomes that have tended to be prioritized by other stakeholders. Indeed, governmental support for WSB developments in Auckland has been motivated in large part by their ability to reduce vehicular congestion - and data gathered in this study suggested 1488 car journeys were being saved daily.

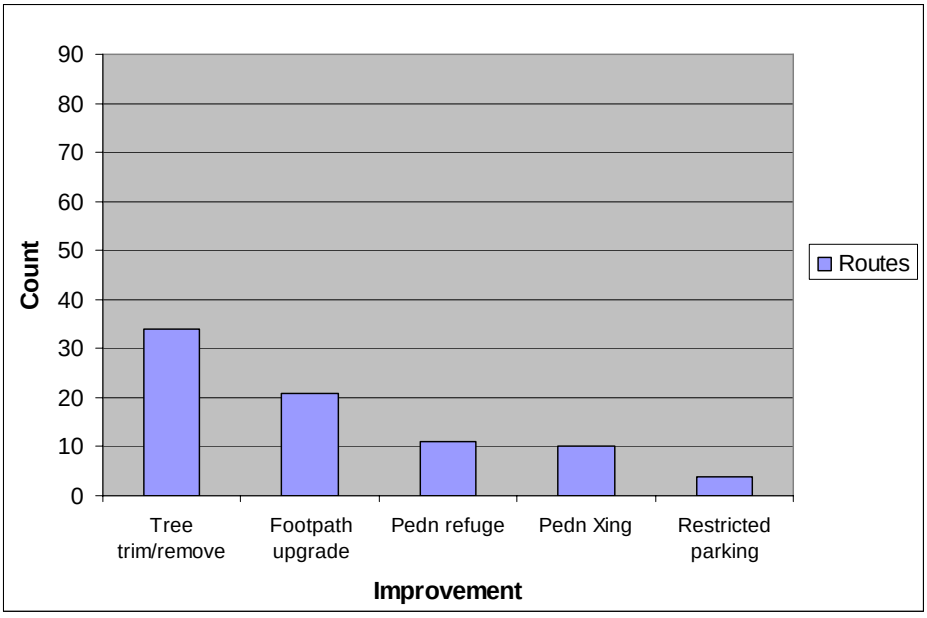
Table 1: Perceived Benefits of WSBs (Weighted)

Benefit	All responses (n=84)	
	Weighted Score	Relative Importance
Exercise for children	137	**0.28**
Sense of community, mixing, social opportunities	131*	0.26
Injury prevention	80	0.16
Alleviate congestion	61	0.12
Children arrive at school on time	44*	0.09
Fun	19	0.04
Save parents' time	11	0.02
Environmentally friendly	8	0.02
Other	7	0.01
Total	498	1.00

* Prompted response – example provided in questionnaire
(Source: 2004 survey)

Previous assessments have noted that improvements within school catchments can be direct outcomes of WSB activities (Collins and Kearns 2005). Our 2004 data indicate continuing frequency of improvements such as attention to overhanging trees and upgrading of the footpaths themselves (Figure 2). Traffic engineering interventions such as the installation of refuges and

Figure 2: Improvements Associated with WSB Initiatives



crossings have also been achieved in a number of cases. Taken overall, these improvements signal the sustained capacity of WSBs to act as leverage for achieving change within local environments.

Respondents were asked to offer comments on their experiences associated with the WSB (whether positive or negative), as well as how the negative issues (if any) were addressed. The responses were coded, and are presented in Table 2. As many coordinators offered more than one response, the counts exceed the sample size.

The most frequently cited positive experience was the new friendships established among both adults and children participating on the WSB routes. Other high-rating positive experiences included the degree of cooperation between parents. In combination, these findings confirm the potential for WSBs to enhance social cohesion at a neighbourhood level. The novelty of incentive schemes and theme days to maintain interest in the WSB was also reported as a positive experience. It is notable that road safety awareness was only the fourth-ranked response, mentioned considerably less frequently than social aspects.

Table 2: Positive experiences encountered by coordinators

Positive experiences	Count
New friendships	23
Parent cooperation	15
Incentive schemes/theme days	15
Promotion of road safety	10
Children's confidence/independence	9
Children's enjoyment	8
Children's fitness	8
Support received	9
Older/younger children interaction	4
Community response	4
Other	7

Table 3 summarises the negative experiences reported. Reflecting trends noted in earlier surveys, the behaviours of parents as well as children are the most frequently reported problem. WSBs involve collaboration between adults and children outside of the usual domains of control for both

Table 3: Negative Experiences Encountered By WSB Coordinators

Negative experiences	Count
Parent/child behaviour	28
Obtaining & maintaining volunteer support	22
Weather & assoc. concerns	13
Traffic management	10
Condition of roads/footpaths	10
Recruiting children	7
Organization and liaison	6
Other	2

parents and teachers (i.e. home and school). An ongoing challenge is therefore how best to manage behaviour within the organised context of a WSB but within the ambiguous public space between these sites (Kearns & Collins, 2003).

The ongoing challenge of obtaining and maintaining parental support again is a widely reported negative experience. This reflects an unfortunate propensity for parents to be more keen for their children to participate as walkers than they are to serve as rostered drivers. Other concerns that merit consideration and the implicit questions they pose include: management of the WSB in wet weather (How wet must a day be to cancel the bus? How are parents made aware of a cancellation?); traffic management and footpath condition (How best can the supporters of a WSB lobby for traffic calming and pavement improvement along the route?); and recruitment/liaison (What works best in terms of 'recruitment drives'? How should coordinators keep in touch with parents?).

While obstacles like wet weather pose frustrations, a more direct threat to WSBs is traffic. Several respondents commented on the dangers posed by "*cars running red lights when children are crossing"* and some vehicles speeding up, rather than slowing down, when approaching red lights. As with other risks posed to WSBs and their success, such problems had not gone unaddressed: in one instance children were educated on the need for *"not crossing until all the cars have stopped*", while in another "*the number plate [of the alleged offender] is recorded and sent to the local police station."* More generally, the crossing of major roads is perceived to be problematic and dangerous, and many respondents commented on a lack of pedestrian crossings, and a perceived unwillingness on the part of local councils to install them in a timely fashion when asked to do so.

Significantly, perhaps, more positive than negative experiences were offered by survey respondents. From the array of enthusiastic feedback, it is worth singling out a few comments that epitomise the sorts of outcomes that have most heartened parents.
First, in the words of two parents:

> *If the WSB achieved nothing else it has been worth it to have the pedestrian crossing upgraded. The traffic now stops for us and it is safer for all pedestrians.*
>
> *The local community have noticed the large numbers of children walking and I think has increased need to be aware of them.*

These narratives speak to the potential for WSB initiatives to be catalysts of neighbourhood change that makes the streets safer for all – both through infrastructural interventions (e.g., traffic calming) and perhaps more significantly (and certainly more cheaply) through influencing driver behaviour and community attitudes.

Second, there is a palpable peer-influence effect, both among parents and children. As one coordinator said, the WSB has "*increased awareness [for] other children in the school regarding walking to school."* This comment speaks to the notion that the best promotion for walking is walking itself, and that the visible commitment to doing so advertises it as a viable alternative to driving. To this extent, walkers themselves may be as powerful a promotion for walking as local government strategy documents. Participating can bring a 'breakthrough' change of awareness, as expressed by another respondent: *"The benefits [for] all who use our route are both seen and unseen. We would never go back to our cars*."

Third, as social activities, walking and talking go hand-in-hand. The lively chatter of a WSB in action speaks to the heightened community cohesion possible when people take the time to walk between home and school: "*The children love meeting and walking together to school. Great friendships have been made as well as conversations enjoyed."* More generally, a WSB is perceived

as a *"great way of bringing our neighbourhood together – [a] fantastic support network,"* and it may become "*a focal point in the community [that] gives neighbours a reason to communicate."*

DISCUSSION

Walking, as one of the most basic forms of transport, has become increasingly marginalised in our cities as traffic congestion has driven walkers from the streets. One consequence is an increasing reliance on the private motor vehicle for routine activities such as getting children to and from school. This paper has reviewed the benefits of walking in terms of health, using the *Te Pae Mahutonga* model of health promotion to identify social participation (through the act of walking with other, and encountering others) and environmental protection (through not using cars) as collective benefits complementing the more recognised benefits accruing to the individual through physical exercise. We also briefly examined the place of walking within local government policy in Auckland, which has begun to incorporate rhetorical support for active travel.

We then turned to an analysis of responses to the November 2004 'census' of WSBs in the Auckland region. It documented the successes of the initiative, and the challenges faced by participants. First, WSBs continue to be a feature in the lives of many parents and children in the Auckland region, although it appears that the trend documented by Collins and Kearns (2005) remains: they are still rare within poorer neighbourhoods. Second, whereas the alleviation of traffic congestion was the most frequently-identified benefit (and reason for establishing a WSB) in 2003 (Kearns et al., 2004), in 2004 this reason was supplanted by concerns regarding exercise and health. This shift in emphasis suggests that the broad-based public benefits of WSBs, including their ability to increase children's levels of physical activity (a concern likely fuelled by escalating publicity concerning childhood obesity) are receiving increasing recognition. WSBs can, perhaps, therefore achieve much over and above their modest contribution to de-congesting the streets immediately around schools.

One key contribution of WSBs is enhancing the social cohesion of neighbourhoods through the sociability generated by participation. To this extent, they are a simply a more focussed and highly organised expression of the way walking in general can lift the connectedness between people and place. Walkable streetscapes are inherently social because they serve not only as places to walk but also as gathering or meeting places, as areas for children to play, and because people are more easily enticed by the accessibility or local shops to walk around their neighbourhoods, and hence more likely to simply 'bump into' one another (Langdon, 1997; Lund, 2003). In other words, walking allows a greater capacity for opportunistic interaction than other modes of transport. Brief conversations, waving hello, and other such (seemingly trivial) interactions actually add to a sense of trust and connection between people and the places they live in when summed over time. These types of stand alone occurrences have been argued to cultivate "a web of public respect and trust, and a resource in time of personal or neighbourhood need" (Jacobs, 1961: 56).

A number of works have shown that walking is a very social activity, both as a form of leisure and as a form of transport. A landmark study by Appleyard and Lintell (1972) found that streets which are designed for pedestrians (liveable streets) increase levels of social interaction, children's play and neighbouring behaviours. Likewise a recent study by Lund (2003) found that people who frequently walk are more likely than those who drive to have unplanned interaction with their neighbours and to form social ties in their neighbourhood. Walkable built environments have also been linked to higher levels of social capital in a study by Leyden (2003). Even where walkable environments are combined with heavy traffic, such as in the case of boulevards, the walkability of the streetscape has been shown to support high levels of social interaction (Bosselmann and Macdonald (1999). In effect it is walkable street life that "keeps alive the idea of a city as a place of unmediated encounters" (Solnit, 2000).

Walkable areas not only foster neighbourhood sociality and unplanned interaction, but, as the WSB example attests, walking is a social practice in and of itself. Many other examples exist of walking being used socially: for example, walking clubs; friends or family meeting up to 'go for a walk'; and choosing to stroll around the shops with others (i.e. 'window shopping'. Research has found that having friends, family or others to walk with encourages individuals to walk more (Giles-Corti & Donovan, 2002, 2003). The initiative we have profiled, the WSB, provides friends to walk with in a structured and routine way, thus ensuring the social life of neighbourhoods are enhanced. Although a constrained by the supervision and structure, children's freedoms are enhanced by WSBs and their predictability ensures the high levels of social support that has been shown to encourage walking (Eyler, Brownson, Bacak, & Housemann, 2003). Recent research examining the effect of walking alone or with a friend on psychological restoration (stress reduction) found that people prefer walking with friends, particularly in urban settings, and that walking in these environments can be restorative. It therefore appears that company enhances the pleasure of walking (Staats & Hartig, 2004) and, for children, the freedom to walk and enjoy the experience, is enhanced by restoring walking to its rightful place as a banal practice of commuting to and from school.

CONCLUSION

WSBs are one response, albeit modest, to disquiet at the effects of automobile-oriented urban areas, particularly as they relate to children. Transportation in New Zealand is now dominated by (and dependent upon) the private vehicle. The car - together with the detached single-family house to and from which it travels – has become a defining feature of urban culture. The embeddedness of these cultural norms means it will be a challenge to achieve changes in both travel behaviour and urban form. However, a counterveiling discourse claims that our cities need to be compact, pedestrian friendly, with mixed use and a greater connectivity provided in grid like streets in order to reduce fuel consumption and pollution, enable economic growth, increase vitality and provide social benefits.

Considering WSBs in terms of their capacity to address issues such as traffic de-congestion, the promotion of physical activity or injury prevention potentially fragments an assessment of their benefits. A holistic urban public health perspective, such as that embodied by the *Te Pae Mahutonga* model, sees the sum as greater than its parts. From the perspective of participants, walking and talking go hand-in-hand and the chatter of a WSB in action speaks to the heightened community cohesion that results when parents break the cycle of chauffeuring children between home and school.

WSBs are one response to children's independent mobility being impaired by parental restrictions placed upon children due to fear of traffic and stranger danger. It is clear that children's mobility has been increasingly restricted in recent decades, and the priorities inherent within modern transportation systems have not acknowledged children's rights as road users. This has negative consequences for physical and social development, children being taught unsustainable transport habits, children's lives becoming increasing scheduled and controlled by parents, and parental time spent ferrying children from one activity to the next. Ideas of the 'active city' warrant serious consideration for their capacity to make space for difference and re-embrace the links between people, place and wellbeing at the neighbourhood level in Australian and New Zealand cities.

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