

Final Report 2012

*Stepping*Out

- Children negotiating independent travel -



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Stepping Out: Children negotiating independent travel
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This study was conducted in partnership with the following investigators and organisations:

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Executive Summary

There is a growing literature on children's active travel and independent mobility, particularly addressing external and regulatory factors that limit or reduce children's movement. Much less is known, however, about the ways children contribute to the process of establishing, maintaining, and negotiating their active and independent travel, especially in the Australian context. Thus, the question informing this research study was: How do children participate in the formation and negotiation of their active and independent mobility?

This study aimed to increase understanding of children's active and independent travel by exploring how children negotiate their mobility. It was conducted within a Children's Rights framework, underpinned by a number of Articles of the United Nations Convention on the Rights of the Child: Article 12, children's right to participate in all matters that affect them; Article 13, children's right to express themselves using appropriate methods; Article 24, children's right to be healthy and enjoy the highest attainable standard of health; and Article 31, children's right to engage in safe play, leisure and recreation. To support these rights, a child-centred participatory approach was adopted to understand how children negotiate and develop their mobility in the contexts of parental rules, family routines, cultural influences, peer social connections, communication technologies, and neighbourhood environments.

The study was conducted in the local government area of Moreland in Victoria, Australia during 2011 and 2012. Mixed methods were employed to explore the role of children in the formation and negotiation of their active and independent travel. These methods included observation, focus-group discussions, interviews and mobile methods including walking to school. A total of 48 children were included in the study, aged 10-12 – a transitional age in social and educational research. Parents (n=8) and teachers (n=4) were also interviewed to increase understanding of the process of negotiation relating to children's independence.

What we identified in our child-oriented study 'Stepping Out: children negotiating independent travel' is that children's mobility is negotiated with and through a number of factors. The findings show negotiation is broader than parent-child interactions, also encompassing negotiating transport systems and traffic networks, built environments, mobile technologies, friends and siblings, routes and routines. Moreover, journeys are often multi-modal, multi-compositional and variable over time in relation to a range of events and circumstances. Researching the mobile lives of children allows us to explore and promote initiatives that support children's physical health and wellbeing, as well as the development of personal, spatial and social skills.





Background

A significant research literature has developed around the subject of children's active travel and independent mobility. The literature on children's mobility has tended to focus on the whether this movement is active or sedentary (inactive), or on whether this movement is independent or not – independence is typically defined as children's freedom to move about in public spaces unaccompanied by an adult (e.g. Hillman et al., 1990). Thus the emphasis has been on the mode of travel and whether or not this supports physical activity (car, train, walk, bike); or alternatively, on forms of mobility and whether a parent or adult is present.

Much of this research literature is based on studies which have shown that children's local active travel and independent mobility has declined significantly in urbanised nations over the last twenty years (Hillman et al., 1990; McDonald, 2007; O'Brien et al., 2000). Whilst this decline is associated with reduced levels of physical activity (e.g. Booth et al., 2000; Dept. of Health and Ageing 2004), growing literature on children's physical mobility is also revealing that the health and wellbeing impacts extend to a whole range of personal, spatial and social dimensions including self-confidence and autonomy; navigation and a sense of place; interaction and connectedness (e.g. Malone, 2007; Ross, 2007; Skelton, 2009; Zubrick et al., 2010).

Studies of independent mobility feature within a number of disciplines, and these research areas engage quite varied questions, methods, orientations, foci, and outcomes. Despite these different frameworks and perspectives they do, nevertheless, share an overlapping interest in developing and supporting children's mobility. Approaches to, and studies of, children's mobility include: children's geographies; transport and planning studies; child studies and social capital; technologies and mobility; and of course, child health and wellbeing (for literature reviews, see:

Garrard 2009; Saelens et al., 2003; Thomson, 2009; Zubrick et al., 2010).

Despite this diversity, the research literature largely focuses on forces delimiting children's mobility, and there is a lot known about different determinants and influences, or dependencies, that shape or attenuate this movement. Much of this attention addresses external and regulatory factors, and the literature shows that barriers to children's active and independent mobility are diverse, but cluster around a number of themes:

- Urban form: Changes to urban spaces and built environments, especially movement networks, infrastructures and traffic congestion, as well as the policy environment and transportation regulation (Carver et al., 2008; McDonald, 2008; Saelens et al., 2003; Whitzman et al., 2009);
- Perceptual form: Shifts in attitudes and perceptions, especially amongst parents restricting children's movement in order to protect them from perceived risks of stranger or traffic dangers (Garrard et al., 2009; Prezza et al., 2005; Valentine and McKendrick, 1997; Vietch et al., 2006; Zivianni et al., 2006; Zubrick et al., 2010).
- Cultural form: Changing lifestyles, habits, behaviours and values, especially an increased dependence on the car (decentralised suburbs and distributed lives), busy working and domestic schedules ('time poor'), and changing norms of parenting (associating good parenting with supervision) (Gill, 2007; Hillman et al., 1990; Malone, 2007; Prezza et al., 2005; Thomson, 2009; VicHealth 2007, 2008; Whitzman 2007; Zubrick et al., 2010).



Thus, within the substantial body of research on children's independence, especially in Australia, the focus is squarely on the impacts of built environments and transportation policies; parental perceptions and rules; and shifts in cultural norms, values and behaviours, which operate to restrict where and how children can travel. That is, the focus in the research literature is heavily skewed towards external forces that work on children, rather than the ways children operate to negotiate and work within the conditions they find themselves in.

In response to the observed and studied dependencies or limitations imposed upon children's active and independent movement, a number of interventions, strategies and measures have been developed to support or encourage children's active travel and independent mobility. Principally, these have mapped onto the correlates outlined that shape or attenuate child travel and mobility.

Consequently, many studies and initiatives aim to promote children's independent mobility through environmental strategies related to infrastructure and planning measures, or social strategies through changing habits and behavioural norms. For example, Australian based initiatives or programs include local government and school-based projects, including the Child Friendly Cities program, which aims to make change at the level of policy and the built environment (Gleeson and Sipe, 2006; UNICEF, 2004; Whitzman et al., 2009); as well as Walk2School days, the Walking School Bus, and the TravelSmart and Streets Ahead active travel policies, which aim to change social habits, educate communities and encourage walking and cycling (VicHealth 2007, 2008).

Underpinning many of these studies and interventions is an orthodox understanding of the concept of independent mobility. Children's independence is typically understood as an opportunity to undertake an activity individually, without the presence or supervision of adult others. Yet, this orthodoxy presumes a

progression to autonomous or unaccompanied movement that often positions child mobility in a dichotomy between dependence and independence.

A focus on barriers to child movement often disregards the diverse relations that constitute and characterise children's mobility and mobile formations – what we describe as children's interdependent mobility. There are some more recent studies from cultural geography and child studies literature that do shift attention to mobility as a relational process, which is progressively and collaboratively achieved over time, and involves numerous and shifting relations between peers, technologies, environments, parents and so on (e.g. Kullman, 2010; Ross, 2007; Mikkelsen and Christensen, 2009). This literature highlights the complexity of mobility processes, with Kullman (2010) noting in his ethnographic research with 7–12-year-olds journeying between home and school in Helsinki, Finland, for example, that 'practices of becoming mobile, including the acquisition of skills, engagement with travel technologies and the shifting child–parent relations [are] implicated in the process' (p.829).

In addition, much less is known about the ways children actively participate in or contribute to the process of establishing, maintaining, and negotiating their mobility, especially in the Australian context. Internationally, there are some exceptions that investigate: how children acquire mobility (Kullman 2010; Ross 2007; Milne 2009; Valentine, 1997); how children perceive local travel and negotiate restrictions (Jones et al., 2000; Hume et al. 2005; Pain et al., 2005); and how children's age, gender, and location impacts on movement (Mackett et al., 2007; Weller and Bruegel, 2009).

Consequently, there have been calls to talk to children, to include the voices and experiences of children in research on mobility (Zubrick et al., 2010). Our research sought to do this, to build on this evidence base in the study of children's active and independent mobility, not by focusing on the forces imposed upon children, but



by including children's perspectives and enquiring into the ways children actively participate in the process of negotiating their mobility. We asked when 'Stepping Out: how do children negotiate their independent travel?' Critical in this child-centred approach is the recognition, informed by the sociology of childhood and a child rights framework, that children possess competencies and agency (e.g. Corsaro, 2005; James et al., 1998; Qvortrup et al., 1994).

Negotiation is an important site in which to explore children's active role in arrangements of travel and mobility. Hart's (1979) early study of children's experience and use of space found that mobility was very much a product of child-parental negotiation, with negotiations often framed around parental fears, or the age and gender of the child. Valentine (1997) built on the early children's geography work of Hart (1979), and explored children's role and influence in the process of negotiation, finding children actively initiate and push for more freedom, and in doing so play an active role in bargaining and redefining their parents' perceptions. She described this through the idea of children's competence: how children are constructed as vulnerable and incompetent, but how they push against and redefine such constructions.

Whilst, then, negotiation emerged as an important factor in earlier literature on children's mobility, it has since been neglected as the emphasis has shifted

onto external and regulatory factors. Some recent research has pointed to negotiation as a critical, yet underdeveloped area of study. It has, for example, been observed that child-parent negotiation operates to shape and review children's boundaries (Lupton and Bailey, 2007). Zubrick et al. (2010) note that there is anecdotal evidence showing parents negotiate unsupervised mobility with children around travel companions – accompanied by friends, siblings or pets – but that this observation has yet to be bolstered by evidence, and so requires more research (p.21). Further, Timperio et al. (2006) speculate that children who live in neighbourhoods with many children may be able negotiate increased opportunities to walk to school, but again this is not yet supported by evidence.

These productive lines of enquiry suggest that negotiation may be an important hinge for mediating the relationship between external factors and children's active involvement and interaction with these physical and social environments. To explore children's role in mobility negotiations in greater detail implies a need for child-oriented and participatory approaches that can access children's perspectives on this interrelated process. Moreover, the bulk of attention on negotiation has focused upon child-parent negotiations, yet the idea of negotiation alerts us to a broader range of places and relations that children must navigate in negotiating their mobility.





Study aims and objectives

The goal of this study was to identify the important features of family and peer negotiations in determination of child utilisation of local spaces and facilities for physical activity and social connection, and to promote the effective inclusion of child and family contributions into urban design planning.

Research objectives

1. To develop and pilot test the extent to which a participatory measurement method is able to provide fine-grained and contextual explanations of, and predictions about how to change, the ways in which the selected social determinants influence negotiations about children's control and independence in relation to physical activity and social participation.
2. Build on the evidence-base of existing investigator research studies in relation to: participatory methodologies; understandings of the role of social geographies in child health and wellbeing; the influence of work demands on family health; the role of technology as a means of social inclusion; and the importance of establishing physical activity as lifestyle behaviours in prevention of child overweight and obesity.
3. To understand how parents and their 10-12 year old children experience and act on selected social determinants of health and wellbeing as they negotiate where, how, and under what conditions their children can develop appropriate control and independence in their environments by participating in physical activity in local spaces and places and establishing and maintaining social and community connections. The selected social determinants are: the gendered construction of space and cultural norms; parental work patterns;

socioeconomic bases of physical infrastructure and planning; equitable access and use of technology such as mobile phones and internet.

4. To understand how 10-12 year old children experience and act on selected social determinants of health and wellbeing as they negotiate with their peers on where, how, and under what conditions they will engage in shared physical activity The selected social determinants are: the gendered construction of space and cultural norms; and equitable access and use of technology such as mobile phones and internet.
5. To develop a participatory model for meaningful inclusion of families in planning and decision-making in regard to urban designs.

Methods

Traditionally child research has been influenced by the status of children in society (Alderson and Morrow 2004). As (France p.177) has noted, 'Historically, research has marginalised the "voice" of young people; up until the mid-1980s most research was focused on rather than with young people'. The dominant paradigm of traditional academic research often treats children as objects of study, rather than active participants (see Ennew et al., 2009). The adoption by the General Assembly of the United Nations of the Convention on the Rights of the Child (UNICEF, 1989) directly impacts academic research with and for children. In particular to our proposed research - Article 12, children's right to participate in all matters that affect them, and Article 13, children's right to express themselves using appropriate methods – impacts upon the way we engage with children about their everyday experiences of mobility.



The study was conducted in the local government area of Moreland in Victoria, Australia during 2011 and 2012, and employed mixed methods to explore the role of children in the formation and negotiation of their active and independent travel. These methods included observation, focus-group discussions, interviews and mobile methods including walking with children aged 10-12 – a transitional age in social and educational terms, representing the shift from primary to secondary school. Using methods and tools that allow children to participate in research respects children's expressive abilities, but also constitutes a rights-informed practice with children.

To gather data appropriate and relevant to the study aims, we employed a layered research design involving a mix of established qualitative and more innovative participatory methods. The methods began with site observation, moved to child focus group discussions, and followed this by accompanying children on their travel journeys. This process was piloted in a child participatory stage to inform the development of the research design; was repeated with different cohorts to compare across the transition from Year 6 primary school to Year 7 secondary school; and although primarily oriented around children's perspectives was contextualised with parent and teacher interviews.

Research stages

1. *Observation* over a number of weeks of a number of key sites and routes within the research area was used to gather contextual and ambient data on the physical and social environment, to get a sense of the location and geography of the study, as well as local children's patterns and practices of mobility. This method sensitised researchers to the study environment, and served to inform the later method. Observation as a research method has a long tradition within the social sciences, including research with children (e.g. Dunn, 2005; Mayall, 2000; Symes, 2007).
 2. *Pilot* of child discussion and child mobile methods (see below) was undertaken with a smaller subset of participants (n=8) in the first year in order to get input from children as research partners. After completing these methods feedback from the children was sought about what they would do differently if they were the researcher. This question was designed as a participatory method to include children as research partners and to gain their advice on possible improvements to the methods from a child's perspective. Our use of participatory methods role modelled our commitment to children's rights and recognition of their capacity and competency in negotiation and independent contributions.
- This participant researcher approach was great for eliciting suggestions from children that assisted in the conduct of the 2012 data gathering. For example, without prompting, a suggestion to go outside, to embed research in place by tracing actual routes was proposed by the children; similarly, following a mobile method journey, a suggestion was made that researchers should accompany children on travel journeys using the same mode of transportation as participants, such as bike. This child input was incorporated into the latter research, which was undertaken with two further Year 6 primary school cohorts, and a Year 7 secondary school cohort. Repeating the methods across the transition between primary and secondary school with children aged 10-12 allowed us to compare changes and developments in mobility
3. *Discussion Groups* with children (n=40) were centred around two visual exercises which used images depicting places of, and then objects involved in, their neighbourhood travel. Children discussed and worked together to come to a group consensus ordering the importance of each image to their independent travel journeys and negotiations. Questions were then asked to elicit further explanation from children about negotiating mobility. The ordering process required children



to debate the issues amongst themselves, rather than address the researcher. This concurred with research showing materials aids are an inclusive technique for stimulating children's responses (Morrow, 2001; Punch, 2000).

Discussion also occurred with parents (n=8) and teachers (n=4) using interview methods, used for pragmatic and methodological reasons. These interviews were structured around understanding of children's independent mobility and the process of negotiation related to children's independent travel.



4. *Mobile Methods*, involved travelling with children (n=10) drawn from the focus groups on a number of daily travel journeys. Children took researchers on a routine travel journey, predominantly to school but also to places such as shops and parks, to show how they normally travelled to that place – e.g. walking, cycling. As part of the mobile method approach, questions were generated in situ, by the environments and interactions that were observed during the journey.

Mobile methods seek to use movement as part of the research approach, and to embed research in the places and routes of travel. This component of the study was critical to developing a more thorough and integrated understanding of how children moved about their neighbourhoods and to explore how their mobility is negotiated, mediated and experienced. These methods have been successfully used in a number of academic studies, including child mobility studies, and have been shown to produce data unable to be captured in more discursive or static methods using diaries, surveys or focus groups (e.g. Kullman 2010; MacDougall et al., 2009; Ross, 2007; Ross et al., 2009).

5. *Contribution to urban planning*: It was identified during the literature review phase that another multi-site study (iMatch/iCatch) was being conducted, which included a primary school in Moreland and planned engagement with Moreland City Council with a specific focus on the involvement of local children in urban planning. In order to avoid duplication of effort we collaborated with the investigators of this study to support their activities.

6. *Site comparisons*: International site comparisons were identified as an alternative contribution to urban planning through analysis of different cultural approaches to support child independent travel. This was an opportunistic use of local and international researchers involved in the Stepping Our study to conduct insider-outsider observation of the settings around schools that shape mobility. This research is under-way in Adelaide, Melbourne, Germany, Scotland and France. Sites 'typical' to the area are selected for multiple observations at different times and days in each case by both an insider- i.e. someone familiar with the site and system, and an outsider – i.e. someone who has come from another country. This allows for identification of different approaches that tend to be taken for granted by insiders. Observations are recorded using field notes, photographs, insider-



outsider discussion and initial follow up of facts and relevant policies. Meetings of researchers from Australia, Germany, France, and Scotland provided an opportunity to discuss critical differences between the different sites and the policy implications.

Employing a multi-method approach such as this has been shown to provide children with a range of opportunities to participate and express their views; to give deeper insights into children's perspectives and experiences; and to allow for cross-checking data and, thus, provide more robust findings (Darbyshire et al., 2005; Fargas-Malet et al., 2010; Morrow, 2008; Punch 2000; Nansen et al., 2012). Data analysis occurred throughout the project to explore emerging

themes and to develop a conceptual understanding of the issues and identification of key considerations in the formation and negotiation of children's physical mobility. A thematic, inductive process was used to identify patterns and contradictions within the data and to allow themes to emerge. This was compared and contrasted within the data set and with other relevant studies and theoretical frameworks.

Research setting

Location: The location of the study were the suburbs of Brunswick, Brunswick West and Coburg, 5-8 kilometers north of Melbourne city centre, which make-up the southern part of the municipality of Moreland, a local government area located within metropolitan



Melbourne. These suburbs were traditionally working class, and post World War II, were populated by a large number of migrants from southern Europe. More recently, migrants from Eastern Europe, Africa, Asia and the Middle East have settled here. This culturally and linguistically diverse (CALD) community is, however, undergoing a process of gentrification as young professionals and families gradually replace post-war migrant households, due to the relative proximity and ease of access to Melbourne CBD for employment, services and amenities.

Built environment: This area has a mixture of building types and uses. Whilst the built environment is predominantly residential, dominated by single story dwellings, especially older Victorian style homes and cottages, these are intermingled with some newer property developments and apartment buildings as well as mixed-use businesses and a legacy of industrial areas and buildings. The residential areas are bordered or divided by a number of heavy-traffic through roads (e.g Sydney Rd; Moreland Rd). Moreland City Council has a number of policies and objectives regarding the built environment and open space. These are addressed in the Moreland Health and Wellbeing Plan 2010-2014, the Active Moreland Framework (2010), and the Moreland Open Space Strategy.

Natural environment: The Moreland Open Space Strategy (MOSS) guides the planning, development, improvement and maintenance of parks across the municipality. MOSS audited all open space using a geographic information system (GIS), and categorises types of open space, which include a range of park sizes and uses, such as informal parkland, sporting areas, conservation parkland, civic public spaces, local parks, undeveloped spaces, as well as two open space corridors, along Moonee Ponds and Merri Creeks, which border the municipality.

Public transport: The area was developed before the era of mass car ownership and has high population densities, good access to public transport and a street

network that makes it relatively easy to get around on foot or by bike. The City of Moreland has an extensive public transport network comprising two train lines, five tram routes, and 18 bus routes. The train and tram network mostly run in a north-south direction, while bus services operate in a predominantly east-west direction, facilitating cross-town journeys and providing linkages between the radial tram and train network servicing Melbourne's centre.

Active transport: The Moreland Integrated Transport Strategy (2010-2019) (MITS) covers the four complementary transport networks of car, public transport, bicycle and foot. A guiding principle of MITS is to give priority to pedestrian and bicycle infrastructure and facilities. These strategies include making improvements to the pedestrian network and the walking environment including paths, lighting, signage, street trees and shade; as well as a cycling network consisting of on-road bicycle lanes, quieter back streets that are often signposted and several off-road paths, particularly at Moreland's boundaries. Whilst, the state government maintains the control of speed limits on all roads, Council attempts to reduce traffic speed and volume on local streets by implementing local area traffic management (LATM) devices such as speed humps, roundabouts and threshold treatments. In addition to hard infrastructures, soft infrastructure measures include traffic slowing 50km/h zones on most local streets, as well as 40 km/h zones along schools during school opening and closing periods. The particularities of the study location may limit the ability to generalise findings to other places, and different geographies, built environments, transportation networks and government policies. Nevertheless, the international site comparisons offer opportunities to overcome these limitations; whilst the approach and methods developed offer insights into children's role in negotiating active and independent travel that has relevance beyond specific environments.



Findings

The findings of the research show that children's mobility is defined by inter-dependencies. Rather than an activity that is completely circumscribed, or alternatively an activity that can become completely autonomous or independent, collaboration, mediation and collective processes shape every aspect of children's mobility patterns. What we identified in our child-oriented study 'Stepping Out: children negotiating independent travel', is a whole range of negotiated movement forms in which children are neither accompanied by an adult nor undertaken unaccompanied, individually/alone. Instead we identify and provide a vocabulary for considering the various forms and modes of travel between the poles of dependence and independence, which are critical to negotiating child mobility: transitions, materials, companions, routes, and routines.

The results of the research reveal that active and independent travel is progressively negotiated through transitions over time; mobility is mediated and facilitated by a number of material technologies or objects (communication; transportation); travel is typically accompanied by others (friends; relatives); movement is preferred along populated routes where passive surveillance occurs; and mobility patterns are shaped by family routines.

These findings challenge the dependent-independent dichotomy approach to children's mobility by revealing fundamental interdependencies of children stepping out. Whilst such interdependent mobility relations may be implicit in discussions of 'independent mobility', they require explication, to more fully flesh-out how mobility is negotiated with and through these factors.





Mobility transitions

We found that mobility and ‘independence’ are progressively negotiated and achieved over time. This progression or development in mobility occurred through stages whereby parents initially accompanied children, this then shifted to allowing travel while ‘shadowing’ children, to allowing travel unaccompanied by parent to some destinations, setting rules about routes to destination, allowing independence if with friends or a mobile phone is carried, practicing new routes together, and finally allowing children to travel without parents on public transport and to travel greater distances unaccompanied, with children deciding on their own route, companions, pace and so on (so transition from adult-led to child-led):

N is quite mature. And when we first started walking N used to walk with a friend B, so we’d drop her over at B’s house, and they’d walk together, and then when I was confident doing that we allowed them to walk to Melville Rd, and then we just added a bit every time.

My mum, she drove the car while I was walking, so if I walked up one road she’d just drive and see where I’d turn and all of that.

Our parents take us a couple of times and then we get used to it, so then we can go on our own.

At the start they will probably come with you and tell you all the roads and stuff but now I just say ‘see ya’.

Next year I’ll catch public transport. I’ll go on the tram with my mum, and then catch another one by myself or with friends.

Within schools, children’s mobility education is primarily focused upon road safety with younger children, or with active travel through a range of programs. The development of independent mobility and the transition from primary to secondary school is not formally incorporated into the curriculum, but

does feature nonetheless in more informal preparation discussions and activities:

We do encourage active moving to school, so we have things like the ride to school days, and walk to school days...In the junior school we do have an excellent road safety program, from P to 2, and we actually do teach road safety. We encourage children to cross the road and walk to school safely.

It’s something that parents frequently discuss with me and parents frequently discuss with their children...We don’t do any actual preparation for that in class, simply because it’s such a huge variety of stuff going on, you know it’s different for each individual kid..one of the things we try to do with the grade sixers, is we try and make sure at some point during the year...we try and take groups of 10 or 12 and some other staff members and we all stomp down to the train and we jump on the train and go into the city.

Mobility materials

We found that mobility is mediated and facilitated by a number of materials – technologies, objects, resources (e.g. transportation, communication). Amongst the materials mediating mobility, children identified and discussed: mobile phones, traffic lights, bikes, footpaths, train crossings, and public transport. Very few things mediating travel were viewed unequivocally, only footpaths were seen to be inherently helpful for securing their safety. Yet even these were considered a problem when not complete:

Bikes emerged as important transportation technologies for primary school children. Role of bikes important for enabling speed of travel:

With bikes, if someone is coming to get you, you can ride off and escape.

You can go faster.

Yeah.

They can dink you!



In contrast, public transport was not mentioned by primary school students as it was not a typical or common experience, but secondary school students engaged in detailed and knowledgeable discussion about routes, modes and timing of public transport, showing that it is critical to their mobility:

Now that we are older, teenagers, we rely more on public transport, like we don't want to arrive to school with mum saying 'love you sweetheart.' It's easier just to come on transport.

Most of the time I'll take a bus up to Sydney Rd and then take a tram down to Dawson St and then a bus up to the school. But it generally involves me running, like I have to sprint, to get to the bus.

It's not too easy for me, because when I go home I take the tram but when I arrive at the place where I get off the bus is usually there waiting and it leaves in about 3 minutes and by the time I cross the road it's already left. It happens almost every day.

By far the most important technology for mediating children's mobility was the mobile phone.

Mobile phones emerged as common, almost ubiquitous, devices for mediating child mobility; yet, their meaning and uses vary. Mobile phones involve the connected, remote or absent-presence rather than physical-presence of adults, parents or peers, and so mediate children's mobility from a distance.

Mobile phones carried by children can be viewed as a surveillance technology in the sense of parental 'remote control' of children's mobility (Fotel and Thomsen, 2004), but they can also be seen to mediate and enable greater confidence, independence etc. Pain et al., (2005) note, for example, the contactability provided by mobiles may help to: alleviate parental fears; free children and parents from set deadlines; expand children's spatial ranges and empower young

people to reclaim public spaces (see also: Davis et al., 20011; Jones et al., 2000; Williams et al., 2006).

In our study, primary students largely viewed mobile phones as helpful for being able to contact their parents and thus offering security or safety (absent presence). In contrast, following transition to secondary school students view phones as essential for their daily lives (not just for safety), and they have a more sophisticated or nuanced engagement and use of them: they discuss more prosaic issues such as credit and batteries; see their value in relation to re-scheduling or re-negotiating meeting times/places with parents; and importantly see them as entwined within their social relationships (not just for parental contact or emergencies, but organising schedules with friends):

You'll have your mobile phone always on you in your bag.

If you are in danger you can call someone.

My mum is so paranoid that I'm going to get in trouble she makes me call before I leave, when I get there, when I'm going to be back, what I'm having for lunch and dinner, if I'm staying there overnight.

You need to have credit in your phone, that's the thing. My battery always dies.

If you're parents say to you be home at like 7 o'clock, you can call and tell them you'll be late.

We text each other to work out if we are going to meet on the second-last carriage or whatever, or if we are going to meet at McDonalds where the train stops.

Teacher and parental views on mobile communications technology recognised that they differ from surveillance and supervision in important ways. They allow for a remote or absent-presence rather than physical-presence, providing a reciprocal sense of comfort or security:



I do know that there are security things in place for some kids, in that they carry a mobile in their bag, which isn't carried at school, but they say to me 'I'm walking home tonight and mum's gonna ring from work as soon as I get home, so I have to turn the mobile on'. So that's obviously systems that the family have in place to support their independent travel.

We will get him a mobile phone next year to be able to stay in touch.

Mobility companions

We found that children's mobility and travel is typically accompanied by others (parents, siblings, and friends). Thus mobile formations involve physically present others, but accompaniment also extends to the mediated or connected presence of others (with mobile communication technologies), as well as the peripheral or visible presence of others in public space (passive surveillance routes).

Observation notes revealed that whilst children moved in groups – composed of parents, siblings, friends and pets; and with bikes, scooters, skateboards and prams – when they left the school, groups were not necessarily structured or orderly; children in grade 6 didn't necessarily walk beside their parents, but often ran, scooted or cycled ahead. They didn't go too far ahead, such as out of sight, and we thought of it as a kind of independence tether stage in the development of children's independent mobility. Similarly the more peer group formation and travel of year 7 children was often disorderly or unstructured with groups splitting or people peeling off in different directions as the group moved.

The presence of parents accompanying children is, as noted above, typically more common with younger children and slowly recedes as children transition to secondary school. Through mobile transitions, we found that friends emerge as important facilitators of mobility for numerous reasons by both children and

parents. Friends provide companionship, a sense of security, and ease parental concerns:

Friends make you feel more secure, if there's a stranger.

Friends give you confidence.

If you have friends near you and you are lost your friend might know a path.

They can alert you if you are about to go in front of a car.

If I got driven to school I wouldn't be able to catch the train with my friends and I would be really lonely in the car, with like no one to talk to. I don't like talking to my parents; they don't have anything good to talk about.

They're so old.

I know, they talk about things like black and white TV, and I'm like I don't care.

Whilst children's mobility and travel is typically accompanied by others, we found that the group composition did not remain static but often varied over the course of a travel journey (this is especially true for school travel and following transitions to greater independence, when the travel patterns of secondary students are more multi-modal). Symes talks about this multi-modality and interdependence through the notion of 'choreographies' of movement, which are assembled through systems, infrastructures, vehicles, timetables, etc; and that travel is not simply active or passive but multi-modal: "the journey to and from school using public transport is often a complex one which, unlike travelling by car, is rarely seamless or 'straight to the point'. It is likely to be discontinuous and multi-modal, involving walking, travelling on a bus and/or train, and periods of waiting" (2007: p.450).

We found that children would meet up with friends or relatives along a route and accompany them the rest of the way; or parents may accompany children for part of a journey (walk to tram stop to go to work).



These multi-compositional journeys mean that parts of a journey may be in groups, whilst other parts may be alone (especially school journey home, children would drop others off along the way, so that a final section may be unaccompanied). Moreover, following the transition to secondary school, school journeys are often further, and the combination of distance and development of independence often results in multi-modal journeys comprised of different transportation modes – travelling on a bus and/or train, waiting, as well as walking, and so physically active travel is often implicit in journeys not exclusively made by car):

I used to meet her half way or go to her house and then we'd walk together.

It's further for me to travel, cause my primary school was really close.

I catch the bus and the train, so I get on the bus then the train and then I walk the rest of the way. My sister is with me sometimes but most the time I do it by myself.

Sometimes I run into friends on the tram.

Teacher and parental views on mobility composition reflects the finding that group travel is common, and that group dynamics vary over the course of a single journey:

Sometimes it's independent, sometimes it's not. Sometimes families do it. There'd be around half of my kids that would find their own way and come independently to school, and I do notice when I'm doing duties outside that a lot of them find each other. So I'll have 3 or 4 in my class turn up together so they obviously walk the same route or pick each other up or get dropped at each other's houses and then come on from there.

He will ride his bike with a group of children, we have friends who live in the street who already ride, so he will ride in a group, which is good.



M is in grade 6 and her sister is in grade 4. She walks her with her sister...I used to walk with them to show them the way. They also meet their cousins on the way, who live near her, and they all walk together.

Whilst friends and phones are viewed as important for mediating and facilitating mobility, children also noted ambivalence and sense of contradictions in things that mediate travel, especially their capacity to distract:

If you are talking with your friends you are more focused on walking and not on walking the way. Sometimes friends can distract you. Yeah like if they say 'hey listen to my music'. They can pull jokes on you and tell you to get off at the wrong stop.

Yeah but if you are texting while you are walking then boom!

You stop.

But not everyone does.

Phones distract you.

Yeah but if you use them wisely they don't.

You might be texting on your phone and there's a road there and your friend will stay 'stop'.

I was playing on my phone and I missed my stop.

Mobility routes

Significance was placed by children and parents on travelling along busier or populated routes, or at more popular times, in which other people are present – as opposed to more isolated lanes or paths. This increases the visibility of children in public spaces and is characterised as passive or informal surveillance as it involves the presence of other adults who have no direct supervisory role, but who nonetheless are present along child travel routes. This kind of mutual surveillance is described as 'natural surveillance' in urban planning and crime prevention literature (e.g. Jacobs, 1962; Sutton et al., 2008).

Passive surveillance was something both children and parents were aware of and utilised. For primary school children this typically involves taking, or not deviating, from a set route; whereas for secondary school children it is not so much a specific route that matters, but rather remaining contactable by mobile phone, ensuring they travel with friends, and travelling along populated routes:

There's more people around on roads but if you are in a lane there could be anyone behind.

There's a laneway behind me house and there's like hobos and homeless people and stuff and they always ask for money even though I've got no money and I'm not allowed to walk down there.

Cause there are a lot of people walking to the same area so maybe it's a bit safer.

My mum says that it's safer on Melville Rd instead of the back streets because if something were to happen to me there's lots of people on Melville Rd to help me.

Teacher and parental views on routes showed that popular routes may provide benefits of passive surveillance, but also increased the possibility and concern for road accidents and road safety. This was especially the case around school leaving time:

I'm happy for them to walk along Melville Rd because there are other people and parents around.

The safety issue re stranger danger; traffic safety, safe places to cross as well...Moreland Rd here, even with the crossing lady there, we have cars parked and the tram going and cars try to zoom to beat the tram and smash into parked cars. A number of times, it is a safety issue.

G rides his bike to school, it is very close but he has to cross the train tracks and Sydney rd to get there. He waits at the crossing when he is with me, but I'm



not sure when he is by himself. I think he might be in a rush to get there in the morning.

Mobility routines

As we have seen, children's travel is often multi-modal, involving journeys comprised of different modes, and this variability within a journey (intra) extends to patterns of travel between journeys (inter), which are not consistent but variable over time in relation to a range of events and circumstances (e.g. weekly schedules, weather; work; extra-curricular activities; public transport schedules; time of day and so on), and in relation to children's development and transitions through age, experience, school transition etc.:

Most of the time I take the tram to school, or sometimes I walk or my mum drives me here. All the time I take the tram back, it's easier. Most of the time with my friends.

If it's raining I get driven by my parents usually, but most of the time I'll take a bus.

If I'm not well then my mum drops me off at school, or if it's really cold then mum takes me, but usually I walk.

In the afternoon I walk with my friend, we walk along Melville rd from school down here, and then he goes up there and I go down here.

When we leave our house cause our Mum's gone to work we have to say we've left and it's like 8.15 or something and then when we get to school we just say 'we're at school'.

It depends on whether my mum and dad are going to work. So sometimes I get driven by car and sometimes I ride my bike or scooter. Riding my bike is my favourite.

I'm going to be travelling in with my dad because he works nearby and then I'm gonna walk to my grandma's house which is 5 minutes walk from there.

Teacher and parental views on routine and work recognise it is important to acknowledge that routines and schedules are part of children's developing travel rather than trying to live up to an imposed normative or prescriptive ideal of active and independent travel. Practices of child mobility are not simply determined by parents' views, built environments or social norms, but are also shaped by a range of other local organisational, environmental, social and familial factors:

..it's up to the families. Quite a few of our families do live outside the area as well, so they are unable to travel on their own, so they do travel with family members because of distance. But also work commitments and starting times for some families. We have one mother who starts at 7.30, so she leaves at that time; her son walks to school on his own but he lives nearby. So it depends, if a family is dropping off their children, going to work or living outside the area.

Coming home they usually walk to nanas and I pick them up after work, on the way through, I work in the city. And on Thursdays I might pick them up at school. Thursdays I'm usually home and Fridays I only work a half day, so sometimes on those days I'll pick them up. But they almost always walk to school.

Mobility negotiation

Rules imposed by parents were largely viewed by children as reasonable in relation to safety. However, in other instances they were viewed by children as unnecessary or overly restrictive and so efforts were made to negotiate or challenge rules. Children highlighted how they negotiated with parents to be able to travel to places in their neighbourhood without supervision, by employing a range of tactics such as: pleading, making a claim for maturity, skills or responsibility, efforts to convince, nag or select which parent to approach. Alternatively, tactics involved mediators of mobility that parents promoted for safety – so children used the presence of a friend or sibling, or the possession of a mobile phone as a tool to



negotiate mobility with parents. Finally, transgression was viewed or used in some instances as a final tactic – though this varied between primary school children – whose transgressions were minor – and secondary school children, who were more circumspect about rules and resorted in instances to lying or sneaking out:

First you could go together (with your parents) just to make sure it's safe and then later be able to go by yourself.

Sometimes I get my laptop and show them the route on Google whatever, so they know where I'll be going. Or I have my phone and say, 'just give me a ring.'

Maybe you say your friends are gonna be there or they're allowed to go.

Say you will go one way and won't go down lanes.

I would tell them that I'll call you when I get there.

You could lie.

Once I snuck out and went to my friend's house.

Site comparisons

Preliminary analyses of the site comparisons identified political, economic, environmental and cultural differences in school planning and environments that influenced child health and mobility. For example, the design of school surrounds varied at each site to support particular types of transport to school. This reflected local policies and practices such as the policy in Scotland that children who live more than 2km from their school are eligible for free bus travel, or alternatively taxi fares when bus travel is not feasible. The number of daily trips to and from school varied per site because of the practice in some countries for children to go home for lunch. Where this occurred,

school bags were often lighter because less needed to be carried to school. Other differences included the age of transition from primary to secondary school, seasonal conditions affecting time and mode of travel, and different funding structures for schools which influenced the external facilities provided for a school following a rebuild.





Conclusion

The literature review revealed extensive research on this issue covering a range of topics including children's independence, mobility and active transport; yet also gaps in the literature about the ways children actively participate in the process of establishing, maintaining, and negotiating their mobility - especially in the Australian context. Through the use of child focussed methods, the research identified the capacity of children to be competent research partners and to provide valuable new insights into an understanding of children's independence.

The findings of the research show that children's mobility is defined by inter-dependencies. The results of the research reveal that the interdependencies of child mobility are characterised by: transitions over time, technology mediation (communication; transportation), travel companions (friends; relatives), passive surveillance on visible routes, and by the routines of family and social life.

What we identified in our child-oriented study 'Stepping Out: children negotiating independent travel' is that children's mobility is negotiated with and through these factors. The findings show negotiation is broader than parent-child interactions, but also encompasses negotiating transport systems and traffic networks, built environments, mobile technologies, friends and siblings, routes and routines. Moreover, journeys are often multi-modal, multi-compositional and variable over time in relation to a range of events and circumstances.

Practices of child mobility are, then, not simply determined by external factors such as parents or built environments, but are shaped by a range of factors. These factors includes children's own agency in situations. Mobility is neither a dependent-independent nor an active-passive dichotomy. Instead,

there are a whole range of negotiated movement forms between the poles of dependence and independence, in which children are neither accompanied by an adult nor unaccompanied. As children move about in public spaces they will move in and out of places that are more or less populated by others, they will move in shifting group compositions, their progress will be mediated by technology and peers, by phones, parents and pleadings, and their journeys will be comprised of many modes of mobility.

Children's independent mobility is relationally organised along a spectrum from stasis to movement, and from dependent to unsupervised. These findings have allowed us to develop theoretical and conceptual frameworks for understanding child mobility. This conceptual framework maps the varied modes and forms of interdependency in child movement. Theoretically, we are in a position to inform the research evidence by developing an understanding of children's social and mobile capital.

This research has the potential to positively influence child health and wellbeing through research evidence that builds on our understanding and knowledge of the factors influencing children's active and independent mobility. Supporting child mobility requires complex and collaborative solutions, and policies that favour contextual and local solutions. The findings of the research offer a number of ways to contribute to the evidence and to inform community practices to support children's mobility. We have identified opportunities to support the interdependencies that facilitate child negotiation of neighbourhood mobility, by acknowledging and promoting how children's own agency and networks of relations might facilitate the development of mobility capital among children. These findings and recommendations will be gathered together in a consensus statement for use



by schools and local government to inform efforts to enhance children’s active and independent travel. This community engagement will help bring relevant evidence to Victorian families to support the health and wellbeing of children.

We increased our understanding of the contextual influence on these mobility negotiations by conducting site observations in France, Scotland, Germany, Melbourne and Adelaide to compare and explore opportunities for promoting child health and active and independent travel. Collaboration with international research partners provided the opportunity for site

observations. Insider-outsider perspectives were used to compare the contextual information and to identify features of the local school community context and broader political, economic, environmental and cultural environments which is often taken for granted. Preliminary analyses of this ongoing component of the research highlighted the important influence of these factors on children’s opportunities for independent mobility and alternative models for promoting child independence. Funding is also being sought for an extension of this study to consider children’s use of public spaces.





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