SCHOOL JOURNEY AS A THIRD PLACE

Theories, Methods and Experiences Around The World

Edited by
Zoe Moody, Ayuko Berchtold-Sedooka, Sara Camponovo, Philip D. Jaffé and Frédéric Darbellay

School Journey as a Third Place

Theories, Methods and Experiences around the World

Edited by
Zoe Moody, Ayuko Berchtold-Sedooka,
Sara Camponovo, Philip D. Jaffé
and Frédéric Darbellay

ANTHEM PRESS

Anthem Press
An imprint of Wimbledon Publishing Company
www.anthempress.com

This edition first published in UK and USA 2023
by ANTHEM PRESS
75–76 Blackfriars Road, London SE1 8HA, UK
or PO Box 9779, London SW19 7ZG, UK
and
244 Madison Ave #116, New York, NY 10016, USA

British Library Cataloguing-in-Publication Data
A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
A catalog record for this book has been requested.
2022921330

ISBN-13: 978-1-83998-631-4 (Hbk)
ISBN-10: 1-83998-631-X (Hbk)

Cover Credit: Africa Studio/Shutterstock.com

This title is also available as an e-book.

CONTENTS

INTRODUCTION

Zoe Moody,[1, 2] Sara Camponovo,[1, 2] Frédéric Darbellay,[2]
Ayuko Berchtold-Sedooka,[1, 2] and Philip D. Jaffé[2]
[1]University of Teacher Education Valais
[2]Centre for Children's Rights Studies, University of Geneva

The Journey to School as an Object of Study

The school journey is an important part of the daily lives of all children attending school. Various studies, from a wide range of disciplines, have highlighted benefits and risks related to children's journeys to school, providing insightful data regarding modes of transportation, health and well-being issues, school organisation and legislation, safety, urban development, and so on. In the past decades, several researchers have shown the decline of children's independent mobility, on the way to and from school too, and the increase in the number of children being driven to school by parents (Frauendienst and Redecker 2011; McDonald 2008; Pooley et al. 2005; Ross 2007). In a car, children barely have the opportunity to interact with the environment, nor to benefit from physical activity after sitting for several hours in a class. Others have highlighted the individual, social and health benefits of autonomous mobility on the way to school. Such a journey can support the links between the child and his or her social and natural environment (Hüttenmoser 2004). Realities, however, vary immensely depending on the context as well as parental fears, concerns, perceptions and attitudes towards children travelling without adult supervision. Most of these studies focus on issues related to road safety and health. Moreover, adults are the main subjects surveyed, while the voices of children are rarely heard on this object and their experiences are not seriously solicited. From the perspective of children's rights and active participation, this book aims to highlight children's views and voices on and about their school journeys, as a subject of study in its own right, as well as to shed light on what are the valuable inputs which can support the creation of child-friendly school journeys.

In this collective work, transitional space – also identified as third, intermediate or interstitial space – is one of the key unifying concepts through which we study the way to and from school. Such a concept allows both to make visible the conjunction of various spaces of life, often considered separate (Djaoui 2016; Flamand 2005), and to take their respective specificities into account. Transitional spaces thus testify to an otherness towards the places that frame and host them (Migliore 2014), underscoring the reciprocal relationship of influence between the individual and the environment. They are

> Spaces-time-movements where something happens, is de-normalised, is fully created in the 'here' and the 'now'. Dependent, however, on contextual effects and produced by actors who play the role of 'passers-by' in the face of these external forces, they call, in order to capture the territorial constructions they provoke, for the observation and/or lived experience of a letting go of oneself in the being-in-space, in the being-with-space. (Le Gall and Rougé 2014, 20)

The way to school includes such features in that it represents a daily transition between homes and schools for children around the world. Focusing on the way to school as a transition space provides a fruitful starting point for understanding this crucial aspect of children's everyday lives. It sheds light on how they experience and perceive the transitions between spaces and their development within them, outside of adult supervision. It also makes it possible to describe the more or less direct impact of the various places they wander through, and of the various actors who inhabit them, on the children's experience, feelings, development and well-being.

The concept of third place developed by the sociologist Oldenburg (1999) is a fruitful operational concept for studying interstitial space, limited in time and space, that is, the way to and from school. This concept is a theoretical standpoint allowing for further exploration of the ways children evolve (e.g. live, socialise, learn, experience and transgress) in interstitial and non-entirely adult-governed spaces. Oldenburg developed the concept of third place to describe areas or spaces in between the two main and meaningful spheres in individuals' lives: home and the workplace. A third place can take many shapes (main street, pub, café, etc.) and allows people not necessarily meant to meet to congregate in a playful and joyful spirit. He extensively describes these polymorphous places, that remain 'just so much space unless the right people are there to make it come alive' (33), from the regulars who inhabit them and the friendships that emerge to their inclusiveness as a prerequisite to their sustainability. Although Oldenburg initially excluded children from his study of the third place, we (along with others, for example, Gutiérrez et al. 1999; Matthews et al. 2000) argue that it should be examined beyond its sole sociocultural dimensions and

therefore also consider its psychological and educational aspects (construction of self, learning, creativity, etc.). In such cases, it becomes a powerful integrative concept to apprehend the complexity of the way to and from school and of children's experiences between home and school.

During this transition, children and young people act, interact, experiment, negotiate and cooperate 'en route'. The school journey as third place becomes a space co-produced by people who are not just 'passers-by' but real actors, agents and co-creators of their reality and their social and spatial environment. In the sense of Lefebvre's triadic theory of space (1974), it is a space experienced by the people who occupy it (*espace vécu*) and not only a space planned and designed (*espace conçu*) by others (urban planners, institutional policies, etc.). On the way to and from school, children develop meaningful social and environmental relationships, mixing up with other children who do not belong to the same 'groups', with whom they learn and relax together, and so on. As genuine social actors, children invest one of the last spaces of freedom they are given to apprehend their environment. The concept of 'third place' supports the study of children's perceptions and representations of their collective and individual experiences of their journey to school and to construct a global understanding of what the way to school means. It also reflects the multidimensionality of the school journey as a third place.

In addition to being a third place between the two main educational and developmental spheres of childhood, the way to and from school can also be seen as a threshold space (Turner 1969; Van Gennep 1909/1981). That is a space between two places, a gap that allows one to pass from one place to another and where identities are questioned (Stawiarski 2010). As Calvez (2000) points out when passing 'the individual is in an intermediate and floating situation between two states [of being]' (p. 83).[1] The notion of threshold can be linked to the way to school by the fact that during the journey between home and school, the child has neither the status of a pupil nor that of a child at home. On the school journey, the child has the leading role, he or she is a social actor who, through his or her practices, participates in the co-construction and definition of this transitional space while also influencing his or her entourage and environment (Bing and Monnard 2015; Camponovo and Moody 2021). At the same time, these passages allow the child to prepare for and approach the roles expected by the surrounding frameworks, but also to distance him- or herself from them, in order to find, even if for a limited time, a self-identity. It is only once the threshold is crossed, in this specific case that of the school or home, that the child adapts and adjusts his or her behaviour to the role expected in the arrival space.

1 Translated from French by the authors.

Several edited volumes have recently focused on children's active transportation and their well-being. This volume offers an original perspective on these matters. First, it suggests an innovative and integrative theoretical framework to study the immense variety of individual and local experiences. Second, it reclaims an interdisciplinary approach to children's mobilities and experiences of space. Combining various disciplinary viewpoints on this object of study provides readers and researchers with a comprehensive understanding of its complexity. What specificities arise depending on various experiences and contexts? What similarities can be drawn on this close-to-be generalised transitional practice? How do children themselves act, impact and appreciate the journey to and from school? These are the main questions that we will explore throughout this book. Moreover, the intercultural perspective can reinforce this detailed yet global analysis of a worldwide shared experience among children. Finally, in line with recent developments in the field of research about and with children, specific attention is given to children's own accounts of their experiences versus adults' understandings of children's experiences.

Structure and Contents of the Collective Work

This book includes various chapters providing different insights on children's experiences of this crucial part of their daily lives, using a range of methodologies to illustrate the experiences of children from around the world. From intercultural and interdisciplinary approaches, international leaders on the topic focus on how children, from very different backgrounds, travel back and forth between their homes and schools, and how this transitional space impacts their daily lives and interactions with their environment. By so doing, an overview of different school journeys worldwide is covered, laying out the contours of a child-friendly and context-responsive transition to and from school.

This collective book consists of eleven chapters, organised into two main sections. The first section presents various theoretical frameworks that have been developed concerning the topic of the school journey. It also documents original research methods and strategies used to generate and analyse data from such theoretical viewpoints. The second section brings together empirical examples of international studies of children's experiences on the way to and from school, highlighting the particularities of different countries.

Theories and Methods to Explore the School Journey

Exploring a complex transitional space, such as the way to school, requires theoretical and methodological creativity and, to a certain extent, innovations. The first part of this collective book offers an overview of the creative options

taken by various researchers and interdisciplinary research teams. Ranging from the field of childhood studies to that of urban development, the disciplinary insights are multiple. If the theoretical and methodological solutions vary from one project to another, their scientific rigour combined with boundless ingenuity can be noted. Also, given that the centrality of children as the main actors of their way to school is a constant, it is worth noting that such innovations can reveal a great deal about children's experiences in transitional spaces.

The first chapter, 'The Multidimensionality of the Way to and from School: A Third Place for Children?', by Ayuko Berchtold-Sedooka, Zoe Moody, Sara Camponovo, Philip D. Jaffé and Frédéric Darbellay, proposes a reflection of the school journey as a third place for children. It initiates a multidimensional analysis of how and under what conditions the school journey is a meaningful experience for children. This chapter presents the main findings of a research project on children's experiences on the way to school and their interactions in this transitional space. Using an interdisciplinary approach (educational sciences, sociology of childhood, and children's rights), it addresses the issues of interactions between children and their environments on the way to and from school, as well as how they invest the possibility to act, think and decide freely. Based on nine case studies (primary schools) from three Swiss Alpine cantons, alternating between urban, peri-urban and rural/mountain areas, the collective and individual experiences of 71 children aged 8–12 years moving without adult supervision on their way to and from school were investigated. By structuring the theoretical framework around the federating concept of 'third place' (Oldenburg 1999), this chapter also explores the plurality of individual and collective experiences each child has along this daily school journey. By so doing, the multidimensionality of this interstitial and non-entirely adult-governed space is highlighted.

Sofia Cele is the author of the second chapter, 'Walking through Mundane Landscapes: Children's Experience of Place during the School Journey', in which she explores how children's activities during their walks to school in Stockholm (Sweden) shape meaning making and relationship to place. While walking, the children interact with other people and various elements of nature and material artefacts. These encounters trigger feelings and allow the child to explore, discover and relate to the surrounding world. Activities in which children engage during their walks may seem trivial to adults. Still, the author argues that they are examples of autotelic processes that are profoundly fulfilling activities in which children repeatedly engage because they enjoy them. The meaning is in the action and not in its outcome. Such activities include playing with or collecting objects, balancing on things, gazing through windows or jumping up to touch something. This continuous explorative

interaction between the child and the material world is based on sensuous impressions and often includes challenging the body through climbing, jumping and running. The child's activity is triggered by the meeting between materiality and the child. The result of these processes is physical activity, creativity, joy, identity formation and an increased ability to understand their neighbourhood. Although the way to school also can involve negative aspects such as bullying, pollution and traffic, the ability to interact with the environment is essential for children's well-being and provides them with a sense of attachment and confidence. The playing, the detours, the stopping to have a look and the conversations between friends during the journey all represent values threatened when children's mobility and access to urban environments decrease. Finally, the author argues that it is necessary to recognise these mundane activities' importance for children's well-being.

In the third chapter, 'Dangers in the Third Place: Walking, Public Transport, and the Experiences of Young Girls in Cape Town and Abuja', by Claire Elisabeth Dungey, Hadiza Ahmad, Joseph Mshelia Yahaya, Fatima Adamu, Plangsat Bitrus Dayil, Ariane De Lannoy and Gina Porter, another, more dangerous, reality of children's experiences on the way to school is presented. The authors focus on the dangers and perceived risks that school-age children from low-income neighbourhoods in Abuja and Cape Town experience on their way to school. The route to school for girls in these locations is challenging as they often feel exposed to threats, including sexual harassment and rape. Even when travelling together in groups – a common strategy to both promote safe travel and provide opportunities for sociable chat – many are still exposed to dangers, especially when walking or entering taxis. In Cape Town townships, girls talk about wanting to escape from their home environment to a safer space at school or an afterschool club but find their routes to these institutions potentially extremely dangerous. In Abuja, girls fear being taken away by 'one-chance' kidnappers, especially when travelling in deserted areas. School journeys have often been described by their informality and unstructured sociability, in contrast to institutional settings where activities might be planned and controlled. This chapter questions the seemingly relaxed interaction in the 'third place' (Oldenburg 1999) that may be more prevalent in Western contexts and asks how children navigate journeys when the 'third place' is experienced as a dangerous space and characterised by constant fear. Drawing on focus group discussions with school children and an innovative peer research method, the chapter reports how girls from low-income neighbourhoods in the two study cities navigate challenging journeys to school and the tactics they employ in their efforts to travel safely.

In Chapter 4, 'The (Im-)possibility of Spatial Autonomy for Young City Dwellers', Nadja Monnet explores how the gradual decrease in the number

of children occupying the streets is often blamed on the intensification of road traffic. It is rarer that attention is paid to the evolution of indoor spatial aspects, such as the growing comfort and spaciousness of interiors, within which multimedia tools are numerous (radio, television, computer, tablet, smartphones) combined with the increasing standardisation, fragmentation and, arguably, growing hostile environment of urban exteriors for the free explorations of young people. This chapter examines trends which have contributed to the withdrawal (be it voluntary or forced) of many children and adolescents into contemporary domestic spaces. The author argues that what happens between home and school can shed light on the possibility or impossibility for young urban dwellers to explore the outside. Along with other daily journeys, the way to school has become the object of particular attention in recent decades both in civil society (with the appearance of *pedibus, trottibus*, school streets, etc.) and within the academic literature, where the centre of interest has slowly expanded to include children's practices outside institutional contexts (family, school, etc.). Inevitably, this requires rethinking methods. The chapter opens up methodological questions and proposes to analyse how this phenomenon can be studied in action and with those concerned rather than relying on the sole interpretation of adults.

To conclude this first section, Sonia Curnier discusses, in Chapter 5, 'The Quality of the Way to School Lies in the Design Details', how design aspects of place and routes may contribute to making the journey to school not only safe but also enriching and playful. School routes are paths where children continue to learn, gain independence, forge their identity and interact with other living beings – be they human or natural. Many aspects that determine this journey are of a social and cultural nature. But the spatial shaping of the way to school can also prove very significant. When it comes to formalising school routes in urban environments, attention is generally focused on guaranteeing children's safety from traffic at a planning level. According to Gehl (2011), necessary activities (moving, waiting, running errands) occur in public spaces regardless of their spatial qualities, while optional activities (relaxation, wandering, play, sociability, etc.) require high-quality outdoor environments to unfold. Relating this principle to the question of children, the author shows that providing enjoyable school routes can only be achieved by offering multifunctional and inspiring environments, making the journey more than simply commuting from home to school. Through metrics, surfacing, choices of materiality and vegetation, lighting features, building entrances and ground floors, and private property edges, city designers can radically impact how children, and people in general, might experience these routes. For instance, paving stones might limit specific recreational travel modes popular with children, such as scooters, roller skates or skateboards, while asphalt is ideally suited for them. On the contrary, intriguing

paving might invite one to play hopscotch on the way to school spontaneously. Whether conscious or unconscious, design choices directly impact future appropriation by supporting (or impeding) some activities. Public space design proves successful when it enables a plurality of activities and cohabitation between users (human and non-human). A generous sidewalk will allow pausing and chatting with friends without impeding people passing by. The journey to school might become even more valuable when featuring multifunctional or equivocal design artefacts. Well-dimensioned steps in front of a classmate's house, besides their practical use of leading to the entrance door, can become a daily meeting place on the way to school, a landscape to climb on or even a stage to host an improvised show. The author then argues that by leaving their function open, such artefacts encourage improvisation, interpretation and experimentation, which are all primary forms of learning. As a result, equivocality and multifunctionality in public space design could increasingly contribute to educational and pedagogical purposes.

Children's Experience of the School Journey

The second part of the book documents very different empirical studies of children's experiences on their way to school across various countries and continents. The aim is twofold: to highlight the diversity of realities and some commonalities. Reading along, the question 'what similarities can be drawn on this close-to-be generalised transitional practice?' is progressively answered.

Penelope Carroll and Karen Witten focus on children's emotional and affective connections through independent mobility and their experiences with space. The results of two projects working with children aged 8–13 years in Auckland, Aotearoa/New Zealand – Kids in the City and Neighbourhoods for Active Kid – are presented in Chapter 6, 'Children's Experiences and Affective Connections with Place in Their Independent Mobility'. The authors explore the independent mobility, physical activity levels and neighbourhood perceptions using a third space (threshold, destination and transitory) place-based framework, focusing on the journey to and from school. For most children, this is an integral part of daily life which can support positive links between children and their social and physical environments. However, realities vary immensely depending on neighbourhood environments. In Kids in the City, 265 children were recruited from six suburban and three inner-city schools. Following seven days of quantitative data collection, 'go-along' walking interviews with 140 participants, and school-based focus groups with 32 suburban participants and a similar number of inner-city participants, delved into their neighbourhood perceptions and experiences. In Neighbourhoods for Active Kids, 1,102 children used an online public

participation GIS (PPGIS) tool to document their journey to school and their experiences and perceptions of neighbourhood as third spaces. In both projects, children were key informants and co-producers of knowledge, reporting on their third space environments, discussing what they liked and disliked and making suggestions for more 'child-friendly' neighbourhoods. The authors argue that the importance of 'third places' for children's well-being is often overlooked and that urban planning needs to support children's propensity to 'appropriate' urban public spaces for play.

While children's voices are crucial to studying and understanding the experiences of living in third places, they can complement adults' perceptions and understanding of children's experiences on the road. Children's independent travel to and from school has sharply declined in the past decades while a growing number of children are taken to and from school by car. In Chapter 7, 'Parental Concerns and Perceptions Related to Children's Independent Travel to School: A Case Study in Germany', Joachim Scheiner and Stefan Lohmüller present the results of a case study in the medium-sized town of Lünen near Dortmund (Germany). They focus on parents' perceptions and attitudes about their children's mobilities. They present descriptive analyses of parental perceptions, subcategorised by basic variables such as child age and gender, and urban environment. This is followed by an analysis regressing selected dimensions of parental perception to household and child sociodemographics and the built and transport environment. The authors draw valuable conclusions for both research and urban planning.

In Chapter 8, 'How Does Family's Daily Mobility between Home and School Change with the Trottibus, a Walking School Bus programme in Quebec, Canada?', Marie-Soleil Cloutier, Sylvanie Godillon and Johanne Charbonneau describe the *Trottibus* project: an initiative developed in Quebec to make children and their families more conscious of the importance of walking to and from school. Since walking to school had been declining for twenty years in Quebec, Canada, the authors present initiatives – such as walking school buses (WSBs) that involve children walking under adult volunteers' supervision, on predefined routes and schedules – that have emerged to reverse this trend. One such programme – the *Trottibus* – was set up in Quebec by the Canadian Cancer Society in 2013. This chapter demonstrates how the modal split evolves for children and parents after a *Trottibus* is set up. A mixed-method methodology was used and consisted of a web survey completed by parents (180 parents at the beginning and 71 parents six months later) and children (172 and 63 children, respectively, when they first started using the *Trottibus* and six months later), and interviews with 22 parents who had previously completed the web survey. The results show that, at Time 1, before the *Trottibus* programme was offered at their school, 56% of

children travelled to school using motorised transport while 37% were already walking. At Time 2, 56% of children were walking to school in the morning (+17%). The interviews show that switching from motorised transport to walking was particularly beneficial for families for whom motorised transport was initially perceived as the most straightforward solution in a context where family and professional schedules are often complex. The authors claim that WSB programmes such as the *Trottibus* represent a good opportunity to change the journeys to school.

In Chapter 9, 'The Spatial Distribution of Walking School Bus: An Interactionist Approach Environment-Family', Eléonore Pigalle focuses on the WSB from an urban planning perspective. Using international literature, she describes the origins of such projects to their expected but sometimes controversial effects. She then shows that its implementation is not only a matter of distance between homes and schools but that it depends just as much on urban and sociological features. Based on a field survey in Lausanne (Switzerland), the European reference city for the WSB, which comprised different data collection methods (census of WSB routes, surveys, interviews, questionnaire survey (n = 218 households)), the chapter highlights the main results of the study. First, the WSB is mainly deployed in well-off neighbourhoods, with similar urban planning, which combined walking and driving. Second, the WSB users have a militant, well-off profile, invested in communities, education and environmental preservation associations. Finally, the author proposes a critical outlook on public policies. The unequal distribution of WSB appears to be determined mainly by social arrangements and geographically anchored, combined with a history of collective commitment. Parents set up a WSB when they feel that the car threatens the safety of their children on the route to school. The WSB is not a planning policy but a communication and awareness strategy based on individual responsibility and morality. Policies more oriented towards planning may be more effective, such as the Danish Safe Routes to School (SRTS) programme launched in the 1970s. SRTS was a planning policy of pedestrian safety by traffic limitation. The author concludes that if the environment–family relationship maximises the capacity for collective action in favour of the WSB, it nevertheless remains a spatially and socially restricted practice. Her results call for caution regarding public policy implementation communication strategies.

Using the theory of planned behaviour (TPB), Peng Jing, Jing Wang, Long Chen and Qi-fen Zha delve into the psychological factors caused by the effects of adults' cognition and behavioural habits to understand children's travel behaviour from and to school in the Chinese city of Shaoxing. The first section of Chapter 10, 'Incorporating the Extended Theory of Planned

Behaviour in a School Travel Mode Choice Model: A Case Study of Shaoxing, China', introduces the role of psychological factors and theoretical models in school journey analyses. The application of the TPB in understanding travel behaviour from and to school is reviewed. Then, the variables used in the extended TPB and the data collection process in China are presented. The descriptive analysis focuses on the survey conducted in Shaoxing, an eastern city in China. The Multiple Indicators and Multiple Causes model is then used to analyse the data, which allows the authors to uncover the relationship between socio-economic characteristics and other latent variables of TPB. Then, parents' profiles' direct and indirect effects on school travel are analysed.

Finally, to include the diversity and the reality of independent mobility of all children, the last chapter focuses on the experiences of children with disabilities. In Chapter 11, 'Thinking about Ableism and Third Place to Understand and Improve the School Journeys of Disabled Children and Their Families', Tim Ross and Ron Buliung develop how ableism (i.e., the normalised preference for specific abilities and disregard for those without such abilities; Goodley 2014) affects the school journeys of families living with childhood disability. It does so with reference to findings from an ethnographic study examining how children with disabilities and their parents experience everyday trips to school throughout the Greater Toronto and Hamilton Area in Ontario, Canada. The chapter begins with a review of the different ways in which ableism persists within the designs of school sites, school buses and accessible student transport services. Attention is also given to how ableist aspects of school travel can cause student safety concerns, require families living with childhood disability to perform inequitable work to access education and prevent opportunities for students with disabilities to interact informally and build relationships with peers. The authors go on to argue that opportunities to experience school journeys as a third place (Oldenburg 1999) must be extended to children with disabilities, who are often required to undergo school journeys without peers (e.g., via accessible student transport services that are segregated from typical student transport services, or via parent-chauffeured trips in private vehicles). They suggest that the scope of inclusive education be extended to encompass school journeys to help integrate children with disabilities into school journeys and give them opportunities to build peer relationships and learn about their communities. Planners and designers are also encouraged to engage families living with childhood disability during planning/design processes so that the families' experiences and viewpoints can inform the built environment and service designs that shape their school journeys. Through this chapter's review and argument, Ross and Buliung highlight how unsettling and addressing normalised ableist aspects of school travel unveils the factors causing children with disabilities and their families to

experience school journeys in inequitable and marginalising ways. By questioning the normalcy of ableism and the processes that shape the material conditions of school travel, school journeys (and the opportunities they present) can be more inclusive for children with disabilities and their families.

References

Bing, Jean-Baptiste and Monnard, Muriel. 'Sur le chemin et dans l'école'. *EspacesTemps.net, Works*. (September 2015).

Calvez, Marcel. 'La liminalité comme analyse socioculturelle du handicap'. *Prévenir* 39, no. 2 (January 2000): 83–89.

Camponovo, Sara and Moody, Zoe. 'Le Chemin De l'école: Un Tiers-Lieu Vecteur d'apprentissages Pour Les enfants?'. *Revue Suisse Des Sciences De l'éducation* 43, no. 2 (2021): 311–24. https://doi.org/10.24452/sjer.43.2.10.

Djaoui, Elian. 'Les espaces intermédiaires, les sas, les seuils'. *Les chantiers, Leroy Merlin Sources*, 16 (April 2016). http://ressources-caue.fr/GED_K/108519192679/Chantier_16_espaces_intermediaires_VD_0416.pdf.

Flamand, Amélie. 'Les Espaces intermédiaires, un état des lieux raisonné'. [Actes de la journée du GIS socio-économie de l'habitat, édition numérique] (December 2005). http://resohab.univ-paris1.fr/jclh05/article.php3?id_article=30.

Frauendienst, Björn and Redecker, Andreas. 'Children's independent mobility in Germany: Where is Germany heading?'. In *Changes in the City*, edited by María José Piñeira Mantiñán and Niamh Moore, 39–50. Santiago de Compostela: Nino-Centro de Impresión Digital, 2011.

Gehl, Jan. *Life between Buildings: Using Public Space*. New York: Van Norstrand Reinhold, 1987, Reprinted by Washington, DC: Island Press, 2011. [Orig. ed. *Livet mellem husene – udeaktiviteter og udemiljøer*, Arkitektens Forlag, 1971].

Goodley, Dan. *Dis/Ability Studies: Theorising Disablism and Ableism*. London, UK: Routledge, 2014.

Gutiérrez, Kris D., Baquedano–López, Patricia and Tejeda, Carlos. 'Rethinking diversity: Hybridity and hybrid language practices in the third space'. *Mind, Culture, and Activity* 6, no. 4 (1999): 286–303.

Hüttenmoser, Marco. '*Scendi e vivi. L'importanza del percorso casa-scuola. Un'analisi basata sui disegni die bambini*' (November 2004). Bioggio.

Lefebvre, Henri. 'La production de l'espace'. *L'Homme et la société* 31–32 (1974): 15–32. https://www.persee.fr/doc/homso_0018-4306_1974_num_31_1_1855.

Le Gall, Julie and Rougé Lionel. 'Osez les entre-deux'. *Carnets de géographes* 7 (December 2014): 1–22.

Matthews, Hugh, Limb, Melanie and Taylor, Mark. 'The "street as thirdspace"'. In *Children's Geographies: Playing, Living, Learning*, edited by Sarah L. Holloway and Gill Valentine, 63–79. London and New York: Routledge, 2000.

McDonald, Noreen C. 'Children's mode choice for the school trip: The role of distance and school location in walking to school'. *Transportation* 35 (January 2008): 23–35. https://doi.org/10.1007/s11116-007-9135-7.

Migliore, Antonietta. 'Espaces de transition. Explorations de l'autonomie à la sortie de l'enfance'. *Revue des Sciences Sociales* 51 (2014): 120–25. https://doi.org/10.4000/revss.3457.

Oldenburg, Ray. *The Great Good Place: Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You through the Day*, 2nd Ed, Michigan: Paragon House, 1999.

Pooley, Colin G., Turnbull Jeans and Adams Mags. 'The journey to school in Britain'. *Area* 37, no. 1 (March 2005): 43–53. https://doi.org/10.1111/j.1475-4762.2005.00605.x.

Ross, Nicola J. '"My journey to school…": Foregrounding the meaning of school journeys and children's engagements and interactions in their everyday localities'. Children's Geographies 5, no. 4 (December 2007): 373–91. https://doi.org/10.1080/14733280701631833.

Stawiarski, Marcin. 'Rien que des seuils: Réflexion sur l'esthétique de l'interstice dans les œuvres de Gabriel Josipovici'. *Conserveries mémorielles* #7. 2010. https://journals.openedition.org/cm/451?lang=en#notes.

Turner, Victor. 'Liminality and communitas'. In The Ritual Process. Structure and Anti-Structure, edited by Victor Tuner, Roger D. Abrahams and Alfred Harris, 94–113. Chicago: Aldine Publishing, 1969.

Van Gennep, Arnold. *Les rites de passage*. Paris : Éditions A. & J. Picard, 1981.

PART I

THEORIES AND METHODS TO EXPLORE THE SCHOOL JOURNEY

Chapter 1

THE MULTIDIMENSIONALITY OF THE WAY TO AND FROM SCHOOL: A THIRD PLACE FOR CHILDREN?

Ayuko Berchtold-Sedooka,[1,2] Zoe Moody,[1,2]
Sara Camponovo,[1,2] Philip D. Jaffé[2] and Frédéric Darbellay[2]
[1]University of Teacher Education Valais
[2]Centre for Children's Rights Studies, University of Geneva

Introduction

In recent decades, independent mobility and children's outdoor leisure time have been significantly reduced in Switzerland, as in most Western countries (Carver et al. 2013; Rivière 2016; Skår and Krogh 2009). However, the results published by Grize et al. (2010) in the trend study on active transportation to school in Switzerland between 1994 and 2005 showed that Swiss children still prefer to use soft or sustainable mobility (walking, cycling or scooter) to go to school. They travel alone or with friends using various means; 65% of children walk and 10% cycle. One in ten children is driven to school by their parents (Pedestrian Mobility Switzerland 2016). However, there has been a slight increase in the number of parents driving their children to and/or from school (or at least once a day). Around 70% of schoolchildren live less than 1.6 km from school (Corso Talento 2010) and this has changed very little over the years, mainly due to the district education system widely adopted in Switzerland, which encourages pupils to attend the school closest to their home. The system favours short journeys and promotes 'a major integration of schools into the social fabric of neighbourhoods' (Poretti 2016, 11). However, analysis of the data from various Swiss cantons reveals substantial differences; children in the German-speaking areas are the most significant users (80%) of soft mobility to go to school. This figure falls to 56% in French-speaking regions and to just 25% in the Italian-speaking canton of Ticino (Grize et al. 2010).

Most studies conducted on the journey to school, especially in Switzerland, focus on road safety and health and are generally carried out by researchers for public bodies (see Association Transports et Environnement 2010; Interkantonale Lehrmittelzentrale 2011; Haberer 2010; Kehne 2011). They show that the main risk factors in road safety, from the parents' point of view, range from the length of the journey to the mode of transport (McDonald 2008), or the number of road crossings to obstacles and problems such as the presence or absence of a pavement or cycle path, or the position of bus stops. However, less is known about how children – the principal users, rather than adults who are merely 'non-active' passers-by – commute between home and school. Some have been conducted on the journey to school and produced some interesting but sparse data on the geographical and historical elements, and the psychological, social and physical abilities children can develop at these times. More work is required on inter- and transdisciplinary approaches and theoretical integrative concepts to fully understand children's varied, complex realities.

Taking a more integrative approach, this chapter presents the results of an inter- and transdisciplinary research project on the experiences of children going to and from school (*Exploring the way to and from school with children: an interdisciplinary approach of children's experiences of the third place*).[1] Here, 'the way to school' is defined by the unifying concept of *third place*, first developed by the sociologist Oldenburg (1999) as the space between the main spheres of an individual's life. When applied to childhood, this concept identifies the time-space between the two main spheres in children's lives: home and school. In this chapter, the concept of third place is also connected to the notions of 'threshold' (Bonnin 2000; Stawiarski 2010) and 'liminality' (Turner 1969), which are equally central to this book. These notions enable the way to school to be viewed as a transitional space within the study, where the status, norms and culture-defining the main spheres of individuals' lives undergo a certain degree of transformation and may be questioned. The child does not have a strictly defined social status at these times (Dartiguenave 2012; Schnugg 2018); he/she has the potential to be and become whatever he/she wants; he/she can attempt to shape the space he/she is passing through, his/her identity, interests, social relationships as well as how he/she is grounded in a place. The way to school can therefore be a space and time where the child can express his/her agency as an actor and social agent, distancing him/herself from the classic statuses of the social and educational systems (Camponovo 2020). In addition, this special third place can serve as a space through which the child

1 This research was funded by the Specialised Committee Interdisciplinary Research (CoSP-ID), Swiss National Science Foundation (SNSF). N°CR11I1_166050. (2017–2021). Main applicant: Zoe Moody. Co-applicants: Philip D. Jaffé and Frédéric Darbellay.

gradually moves to occupy the roles of student and child at home (Camponovo and Moody 2021). The child is also a co-producer of this third place by testing out multiple individual and collective experiences.

We present the details of our research framework, specifically the main questions and objectives, then the methods used, study sample and ethical considerations, followed by a presentation of the results along three lines of analysis: (a) the way to school as a social space; (b) learning, play and creativity and (c) the child's well-being and environment.

Exploring the Way to School as a Third Place

Research questions and objectives

How and under what conditions is the way to school a meaningful experience for children? This project aimed to explore the experiences of children on their way to school and their interactions with peers, adults and their environment. This time-space is considered a transitional place between two spheres significant to the child's development: home and school. The interdependence between them has been closely scrutinised in recent years, and children's need to be autonomous is now widely acknowledged from both the scientific and the legal perspectives. Less is known, however, about how children move from one sphere to the other and how the space between them moulds the child's development and his/her relationships with family and school.

The theoretical and empirical basis for this project was organised around three interdependent questions:

1. How and by what means does the way to school encourage interaction between children and identity development?
2. How and by what means is the journey between school and home an opportunity for children to learn, be creative and play?
3. How and by what means is the way to school a third place for children?

These complementary questions guided the design of the methodological device (observations, drawings and accounts, mobile interviews and Diamond Ranking) to conduct a qualitative survey organised into case studies.

The first objective was to develop theoretical tools and collaborative practices to encourage interaction between the scientific disciplines so as to consolidate the individual and collective expertise for conducting this research within the field of childhood studies. The aims of the project were to construct a theoretical and interdisciplinary explanatory model of children's experiences of passing between the main educational spheres (home and school), using their daily journeys between them as the basis for empirical research.

The second objective was to actively and ethically involve children in the research process at key data collection and analysis moments. With participation and transdisciplinarity in mind (Brown et al. 2010; Hirsch et al. 2008; Thompson Klein et al. 2001), the aim was to contribute to research with children, particularly the methodological considerations, using a real example of a group of children actively participating in the research process as co-researchers (Camponovo et al. 2020; Moody et al. 2020).

The final objective was to create a set of recommendations based on theoretical reflections and empirical data to help families, communities and schools to work *for* and *with* children in developing child-friendly ways of going to school (see Torres 2020).

Interdisciplinary perspective and mosaic methods

This project built upon an interdisciplinary perspective combining various complementary disciplines, namely education, psychology, sociology and law. It also included the viewpoints of the stakeholders involved: children themselves, parents and school administrators. Firmly rooted in interdisciplinary childhood studies, the project had a targeted transdisciplinary approach by conducting research not just *on* but *with* and *for* children (Morrow 2008). Children were at the heart of this project; as proper subjects and not just research objects.

This research also followed a mosaic approach (Clark 2005, 2010; Clark et al. 2013), combining multiple methodological tools, such as observations, interviews, pictorial representations and group activities. By aiming to produce a composite representation of their daily lives, this approach showed how children, as agents of the transition between home and school, co-construct and transform this time-space. The following mosaic methods were used in the survey: preliminary questionnaires (to parents and school administrators) on organising the journey to school and related issues; non-participant observation of the children's arrival at and departure from school, and noting the characteristics of these moments; production of drawing and narrative (individual activity) representing the daily journey between home and school; mobile interviews (individual activity) showing the variations in the children's experiences; a Diamond Ranking exercise (in groups of four to five)[2] to show the child-friendly characteristics of their journeys to and from school.

---

2 Nine pictures of a typical journey to school, selected on the basis of data gathered in the previous phases, were presented to the children taking part in the study. In groups of four or five (two activities per case), the children were asked to rank the pictures by answering the question: "What is the best way to school?" The Diamond Ranking activity allows children to select the three pictures they find most significant, three of medium significance and three least significant.

Case study and sample

Three Alpine regions of Switzerland were selected as the locations for nine case studies to fully appreciate children's mixed experiences. The schools were located in the cantons of Graubünden (German-speaking), Ticino (Italian-speaking) and Valais (French-speaking). While they were geographically and politically similar, they showed some diversity from linguistic, cultural and educational perspectives (e.g. the length of time in primary education differs between all three cantons). Nine schools were selected to represent each canton's regional specificities, three in an urban setting, three in a suburban neighbourhood, and three in a rural/mountain location. This selection ensured diversity in the study of the children's experiences of the way to school and helped identify possible similarities and differences in various settings.

To ensure a diversified sample of the different ways children living in Switzerland go to school, the selection of participants was based on diversity of sex, age, place of residence, means of transport and distance of the home–school journey. The total sample consisted of 71 children, 39 girls and 32 boys aged 8–12 years (Table 1.1), 69 parents and 9 school administrators.

Table 1.1 Sub-sample of children

Gender			
Girls		Boys	
39		32	
Geographical Setting			
Urban	Suburban	Rural/mountain	
18	28	25	
Age			
8 years	9 years	10 years	11 years and older
16	17	18	20
Distance From School			
Less than 500 metres	500–1,000 metres	1–5 kilometres	Over 5 kilometres
12	30	21	8
Means of Transport			
Walking	Bike/scooter	Public and school bus	Combination
30	21	16	4

In addition to the main sample, a group of seven children with special educational needs from the canton of Ticino took part in the project, in an additional module. These children, two girls and five boys aged from 9 to 11 years, attended special classes in two ordinary primary schools participating in the survey. All seven children went to school unaccompanied by their parents; two walked a distance of 500–1,000 metres to school, the others had a longer journey (1–5 kilometres or more) and their canton provided them with transport (taxi or minibus).

Ethical issues

All current ethical issues in education research and involving children were considered.[3] These issues guaranteed the personal rights of the participants at each stage of the research process, from selecting the sample to contacting participants and obtaining their informed consent. The children selected were first requested to give written assent to participate in the project, accompanied by consent from their parent or legal representative. The request for consent was renegotiated verbally at the start of every meeting once participants had been reminded of the content, objectives and procedure of the proposed activity. Confidentiality of individual identities and data gathered was ensured by anonymising the results. These ethical issues helped reassure the children and encourage them to speak freely about their feelings and aspects of their experiences, without fear of their parents or teachers finding out, and also ensured their right to withdraw from the research at any time, without prejudice and without giving a reason for doing so (Fargas-Malet et al. 2010; Powell et al. 2012; Todd 2012).

Issues surrounding the power relationships in participative research with children have also been considered at every stage of the study (Bell 2008; Côté and Lavoie 2020; Graham et al. 2013) and researchers attempted to minimize the power imbalance between children and adults throughout the research process. Using less formal, classroom-type activities involving play, such as drawing a picture or discussing a subject in which the children are experts, made it easier to access their world. All their input, whether verbal accounts, practices, representations or ideas, has been received by the researchers without judgment. The researchers also used language appropriate to the children's level of linguistic development and encouraged free expression to help build trust. Lastly, holding the research activities in a familiar environment which

3 For more detailed information about the ethical dimensions of this project, see Moody et al. (2020).

the children frequently use – either in the classroom (for a drawing and account activity or the Diamond Ranking exercise) or on the way to school (mobile interviews and observations) – helped create a less formal atmosphere (Camponovo et al. 2020).

The Way to School as a Social Space

Places for social interaction and with other living things

Data analysis shows that the journeys between home and school are special times for children, like a 'right' to children-only time when they have the freedom to talk and do things they would not necessarily do in the company of their parents. Children were seen engaging in various activities, either on their own or in groups on the way to school, such as talking, socialising, playing and exploring, with a conversation among the top activities. A total of 46 of the 71 children who participated state that they use this time to talk with their friends about subjects (personal secrets) which they do not discuss in front of their parents. However, they tend not to talk much with the adults they meet. Thierry (aged 12) states that he enjoys not having his parents taking him to school because: 'It's … more private. I talk to my friends, we speak the language of school, not family'. One girl (Tina, aged 10) says she likes making the journey without her parents because she can discuss personal things with her friend. Adriana (aged 9) says: 'I like walking to school with my friends because we can share secrets'. Several children also say that it is the only time they can talk freely because they feel significant schedule pressure at school or do not find enough time during breaks.

Children's social interactions on the way to school are not restricted to human contact; they also happily interact with animals. Several children say they have learned to recognise the behaviours and needs of the 'furry' creatures (mainly cats and dogs) they meet on their way to school and, therefore, to interact appropriately. Some say that they have made physical contact and established relationships. They consider these animals as agents of 'animate relatedness', as defined by Myers and Saunders (2002, 156), meaning social beings with which to interact and develop relationships since, like humans, they display agency and affectivity. This is the case for Jasper (aged 8), who stops stroking the cats and dogs he meets and 'talk with them' for a while. Elodie (aged 11) also describes several encounters with animals on the way to school, some more enjoyable than others. She meets domestic animals, mainly cats and dogs, and these encounters are more of a source of fear or danger to her. She expresses her negative emotions towards them several times, in a drawing of her journey to school where she uses the label 'bad dogs', and

in the mobile interview: 'Small dogs come out because people don't tie them up and there was a hole, and they could go through it because it was broken. Then, they were going past, and I was scared. … when they came out, and I was scared, I went back and all the way around'. When Elodie comes across cats, another type of interaction occurs: 'I call all black cats Mr Midnight because there's a game with a cat called Mr Midnight, and now I love black cats'. Animals are social partners in their own right, and children interact with them through various communication channels, adjusting their attitudes accordingly (Myers and Saunders 2002; Servais 2007).

Identities

Identity is a complex, multidimensional phenomenon with a subjective and unique meaning for the individual, but also a collective sense in how it develops through interactions with others (Marc 2016). Identity develops, changes and evolves over a lifetime; in addition, the contact and interaction with the people in an individual's close and wider circles (friends, acquaintances, colleagues, etc.) have a fundamental role in identity development (Guérin-Pace 2006). This social dimension of identity is felt by belonging to different social groups, varying in size as well as culturally and historically (Calin 1998). Childhood is a critical period for joining the various social groups children interact with daily. During childhood, social experiences become significant in building a sense of belonging and the child's identity in the social world. Five main categories were identified inductively from the data which can contribute to developing the child's social identity on the way to school: age, sex, mixed group, personal interest and space/territory.

Some children reveal in the mobile interviews or group activities that they see themselves as 'the big ones' or 'the little ones' on the way to school. The positive connotation of the term 'big' versus negative for 'little' evolves depending on the context. The use of the playground is an example of this identity issue concerning age. The 10- to 11-year-olds think playgrounds are places for younger children; they do not identify with the youngest children using this kind of amenity. The distinction between 'big and little' can also be observed in the bus; the seats occupied by the children depend on their age. Chantal (aged 10) says: 'The big ones sit right at the back … so, that's the class above me because next year, well, I'm in the last year and then I'm going to middle school. So, like … the last years go right at the back before they go up to middle school'.

Unlike the previous two categories, most children say there is no particular distinction in terms of age or sex in choosing which groups to belong to on the way to school. These mixed groups tend to be even more pronounced once

the children meet their friends in the schoolyard. According to the children, there is not any separation between girls and boys before school starts: it is a time of sharing when the main activities are conversation and play. However, observations show that groupings are clearly formed, albeit unconsciously, according to closeness in age, sex or school class.

Some children talked about feeling they belong to a group because of their interests. For example, Alexander (aged 8) sits with friends from his football team on the bus. He says that because he skipped a school year, personal interest influences the group he belongs to rather than the age group. Alice (aged 9) travels to school with 'my friend, a girl, and her friend, who's a boy', and they discuss their interests.

Social identity also develops in relation to space and territory. Does the child seem attached to a particular place on the way to school? The notion of spatial/territorial identity consists of two processes which allow identity to form in connection to a territory or place, namely the construction of (1) a sense of belonging and (2) a sense of attachment. While they differ, these processes reinforce each other and contribute to constructing the individual's identity (Guérin-Pace 2007). One of the most decisive factors in a child's sense of belonging to a group is living in the same neighbourhood, along with the factors above-mentioned (age, school class, sex, etc.). Many children say that they make the journey to school with neighbourhood friends. The issue of territorial identity (Guérin-Pace 2006) also applies in a broader context, for example, when Jeffrey (aged 11) compares the 'us' of his town to other Swiss people coming from neighbouring cantons: 'Some people, who come from Zurich for example, I mean from a different canton, they're known for not stopping at pedestrian crossings!'.

Agency (transgression of norms)

Agency is understood as the child's capacity to do, act and make independent decisions and choices – without adult help – to achieve individual and collective objectives (Porter et al. 2020; Camponovo 2020). Findings show that the way to school is a third place for expressing agency. In the mobile interviews, over half of the participants refer to their capacity to act independently between home and school, either verbally or through action. Children say they have gradually become more independent in how they plan to go to and from school. Their choices are based mainly on personal interests, such as several children travelling together, going via a particular place, through the woods, and so on, depending on after-school activities, the weather, the season or even how quickly they want to get home. The meeting place and timing are often planned with other children on the same journey.

Agency on the way to school is also expressed by transgressing the norms and rules imposed by society or family, demonstrating children's freedom in the adult world. This particular third place can be a liminal space where children claim their role as social actors. As shown by Lehman-Frisch and Vivet (2011), transgression supports the child's empowerment process (Le Gall and Rougé 2014). It is interesting to note that when children transgress, they are usually aware of having done so. The self-reflective dimension of agency is clear here: children reflect on the action they take and its possible positive or negative consequences. For example, when arriving at a red light in a mobile interview, Elias (aged 10) tells us: 'Sometimes we cross when it's red here. We don't when we're on our bikes, but we do when we're walking!'. The transgression is closely linked to socialisation, to feeling 'like the others' and belonging to a particular social group (Brewer 2001), like Lorenza (aged 10) who says, about breaking school rules: 'I do it because everyone does it!'.

Negotiation is another form of agency observed on the way to school. Children negotiate with their friends on which routes to take, or with their parents about what method of transport to use (bicycle, scooter, etc.). Bastian (aged 10) talks about having negotiated the possibility of cycling to school, like all his friends, with his father: 'It hasn't been long since I was allowed to cycle to school … my father didn't use to let me before … but I told him that I would lock my bike up with the padlock and it would be fine … he let me cycle in the end'.

Learning, play and creativity

The way to school is a third place for socialising, interacting and expressing individual and collective agency. Going to school in a group of children offers essential moments in a child's life: being confronted with others' words and behaviours, sharing experiences, sometimes being transgressive in nature and discovering. These moments create a mood of enjoyment and happiness, contributing to individualisation, socialisation, freedom of thought and action, and personal well-being.

The way to school as a third place also plays a part in the child's education and good physical and cognitive development. Several researchers have shown (Hüttenmoser 2004; Kaufmann-Hayoz 2010; Murray 2007) that places outside the institutions of home and school can present situations and opportunities conducive to acquiring new skills. Propelled by curiosity and their observation skills, children explore the world around them. They learn how to understand and behave in their surroundings by adapting their behaviour and practices, and thereby become the prime actors and beneficiaries of informal education (Camponovo and Moody 2021). Findings show that children acquire informal knowledge on the way to school, which

'refers back to the process of acquiring knowledge and skills outside official and non-official educational programs' (Schugurensky 2007, 22).

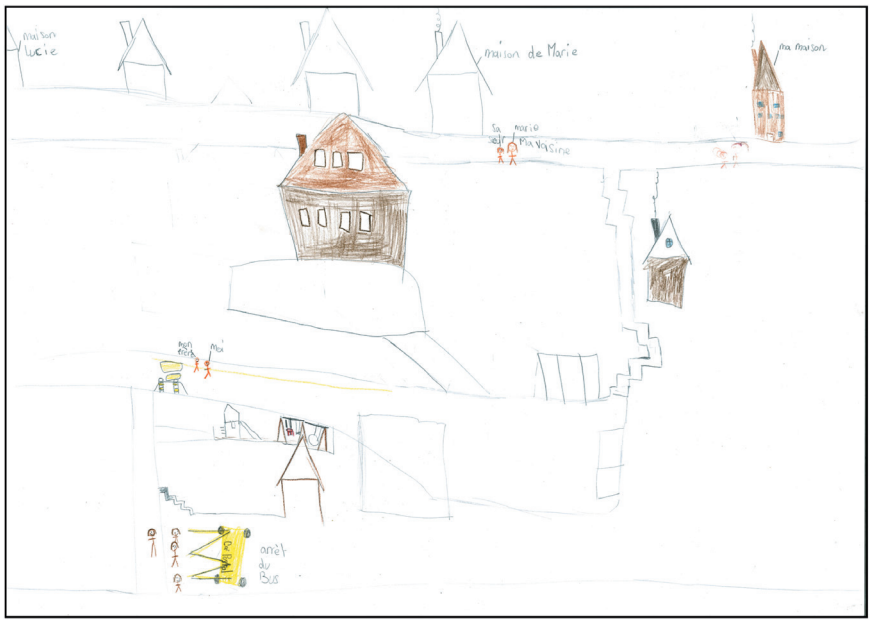
Over half of the children who participated in the study (54 out of 71) argue that they develop essential skills on the way to school, in particular: independence, explicitly looking after themselves, handling difficult situations and self-confidence; organisational skills, such as estimating time and speed; knowledge about the environment (geography and nature); and the capacity to adapt their attitude when interacting with others on the school journey (children, adults, animals). In terms of gradually becoming independent, children say that they have learned to handle difficult situations, or adapt to conditions they consider dangerous, deploying innovative and creative solutions to deal with such challenges. Naomi (aged 9) talks about having developed a clever technique for crossing the road safely, using the large windows of her school on the other side of the road to see the reflections of approaching cars. Other children describe conflict situations and fights at the bus stop or on the bus. Doriane (aged 11) suggests that such incidents are quickly settled during the journey by the children themselves:

> Often when there are arguments […] I get annoyed that the other girl started on at me, […] I try to talk to her. But if she doesn't want to, then it's not my problem. If she says sorry, then that's OK with me […] If everyone's annoyed, I don't usually do anything. I wait a bit, and then it stops.

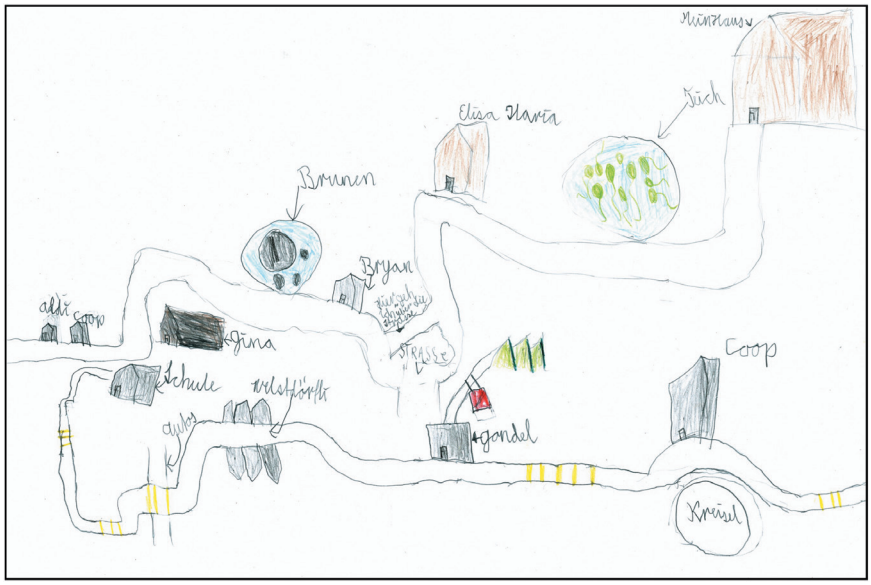
Confrontation with others helps children develop the mediation skills used in resolving conflicts, such as listening, mutual respect, communication, empathy, self-control or verbalising their emotions (Cartron 2004; Lévesque 2019; Winnykamen 2004).

Children also learn to independently organise their journey to school depending on the weather, season, time of day or after-school commitments. Sayana (aged 9) tells us that she only takes a shortcut to school along the river in the afternoons because: 'It's cold by the stream in the morning'. Children also learn to manage space and time; they take command of space, developing and modifying it to suit their interests and current desires. Several children say their route varies depending on the time available, who they are with, or how they feel physically, usually referring to tiredness. Mathis (aged 10) says: 'Sometimes my bags are really heavy, so I go through the vineyard. It's a bit of a shortcut'.

The way to school proves to be a third place conducive to discovering geographical settings and the natural environment. The children's detailed knowledge of the geography of their neighbourhood, district or village and the possible routes are clear from their drawings. Figure 1.1 presents two drawings demonstrating how attentive the children are to their surroundings as they go to school.



Zoe (11 years old)



Yeva (10 years old)

Figure 1.1 Examples of drawings on the way to school

Going to school independently means the children learn street names, bus stop locations along the route, district names and even special practices and characteristics in their neighbourhood or village. Judy (aged 12) discovered a particular feature of her village by walking to the bus stop every day: 'Up at the back, a really long way behind, there are some very old maple trees. They are so big, you need five people to "hug" them'. Another girl, Myriam (aged 12), says that she has learned lots of things about the area around her home by walking or cycling to school on her own, such as the little alleyways she can use as a shortcut. Children also learn to recognise the natural elements they are exposed to. As she walks by the river, which she can name, and through meadows, every day, Rakel (aged 10) says she sees and can recognise lots of flowers: 'The flowers you blow are called dandelions'.

The knowledge and skills developed on the way to school sometimes result from play and fun activities. Through play, children consciously or unconsciously acquire knowledge and skills that will be useful throughout their development (Camponovo and Moody 2021). The main play activities observed and mentioned by the participants on the way to school are physical play which combines competitive play with the means of transport. Other types are games with rules, exploratory play, symbolic play and constructive play. Playing on the way to school is primarily a source of pleasure and physical and mental relaxation before and after the school day. Physical play, or sport, is most commonly mentioned by participants. Means of transportation (bicycle and scooter) are also used by children for fun, as Alice (aged 9) shows in her drawing (Figure 1.2).

Children play balancing games on their bicycles or on the edge of the pavement and even practice jumps and skids on their own or with one or more companions. In the mobile interview, Kevin (aged 10) says: 'Well, I like this bit because you can go fast, and I like that bit because I go that way on the bike to do skids. I can skid on the gravel'. Cycling and scooter competitions are also standard on the way to school. Lorenza (aged 10) tells us: 'We compete

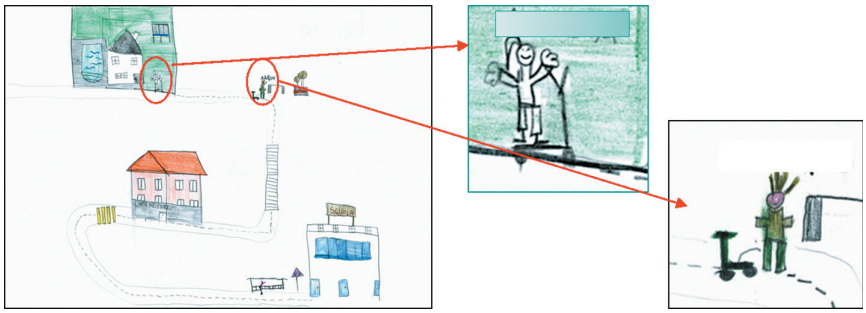


Figure 1.2 Alice's journey to school (aged 9)

to see who's the first to reach the slope going down to school. I'm always second, or often first too […] because my bike is bigger than my friends' '.

Other children associate physical activity and sport with play, allowing them to show their skills. More confined parts of the route become a place to test physical ability or courage. Fantasy play generally occurs among the children using a passive means of transport, such as the bus (school or public). The limited space and necessary good behaviour on the bus create the conditions for this activity which does not require much movement of the body but does demand great imagination and creativity. Adriana (aged 9) says she plays 'kittens' with her friend while on the bus. They pretend to be cats and make up scenarios inspired by daily life or totally invented.

Child Welfare and Safety

Effect of soft mobility on mental and physical well-being

The way to school is a time-space in which children benefit physically and mentally, and it is an important part of their daily life as it helps them prepare for the day at school. In a mobile interview, one child said he needs to bike to school even though it takes around 30 minutes because it helps him burn off energy and stress, so he feels calmer when he arrives. 'My favourite part [of my journey to school] is the uphill bit because it gives me energy […] I never feel tired because we are sitting down at school a lot, so cycling to school is like doing sport' (Jaspar, aged 8). Other children also describe the journey to school as a time for exercise, benefitting their physical and mental well-being: 'It's very strict at school, so it's like time to recover. Before you do your homework, you can just relax' (Liana, aged 12); 'I have to walk longer. So, when I'm going to school, I really get my legs going. I like it when we're not too close to the bus stop' (Anthony, aged 9).

Well-being and nature

Children in developed Western countries are spending less time on nature-based outdoor activities (Clements 2004). An increasing number have a childhood in which fresh air and nature are being replaced by the interior and virtual world (Macfarlane 2015; Louv 2005). However, time spent outdoors, particularly in natural environments and in contact with nature, is an essential aspect of child development (Sobel 1993). Numerous studies show that the individual can establish various contacts with nature, which can influence the child's psychological, affective and cognitive development (Cheng and Monroe 2012; Harvey 1990/2010; Kellert 2002; Mitten et al. 2014). The results of this research, more specifically of the Diamond Ranking activity, show that children tend to think positively about their journey to school in their relationship with the natural

environment: '[In the forest] I think it's cool because you can go off-road through it on your bike like people do, and the forest and trees there can protect you from the rain, and it's great in summer because there's lots of shade' (Group A, rural/mountain setting); 'I like walking in nature; the landscape is lovely; it's quite an open space' (Group B, suburban neighbourhood); 'Because there are lots of plants. It's lovely. There's no traffic or cars. You can run. You can jump and walk wherever you like. […] I like it because you can […] sometimes there might be animals, and you can play hunters' (Group C, urban setting). Children develop direct relationships with elements of nature, such as trees, flowers, vineyards, mountains, stones, rivers, fountain water, hedges, grapevines and apples, and animals (cats, dogs, goats, cows and sheep) on the way to school. The drawings of their journeys tend to be quite faithful to aspects of the natural world they are in contact with every day; 49 of the 71 children reproduced elements of the natural world under the categories of 'mixed zones', 'green spaces' and 'plants'. They include representations of aspects of the natural world such as geological features, trees, flowers, public parks and private gardens, vineyards or vegetation like forests or meadows.

Similarly, in the mobile interview accounts, many children mention the natural elements of their journey to school or the natural environment they pass through. These elements can be grouped into five categories: (a) domestic and maintained vegetation (hedges, private gardens, etc.); (b) more 'decorative' vegetation (e.g. flowers, ivy, a fountain decorated with flowers and plants); (c) wilder vegetation (forest, meadow/grassland, lavender fields, trees, plants); (d) cultivated vegetation (vines, grapes, apple and chestnut trees) and (e) natural water elements (river, canal, stream, snow). Awareness of the seasons and weather conditions can also be noted. Some children include weather elements in their drawings, such as clouds or the sun. In the mobile interviews, they relate to how snow, an avalanche, rain or cold influence their journey to school, particularly their choice of transportation: 'In winter, I walk, in summer, spring and sometimes in autumn, I cycle' (Lorenza, aged 10). One girl does not like going to school through the woods at certain times of the year: 'Not in winter because it's a bit dark and also snow falls from the trees, I think it's a bit dangerous' (Liana, aged 12). Another girl describes her delight in the different seasons: 'Sometimes there are autumn colours and sometimes it's all green. The colours change' (Zoe, aged 11).

Contact with nature makes the children's journey to school more enjoyable; they use words like 'cool', 'exciting', 'nice', 'fun' and 'I like it'. Several children say that they like or enjoy experiencing nature by walking or cycling, such as through vineyards, forests or meadows. Rakel (aged 10) tells that she enjoys playing with stones: 'I like it in this place because when you walk here, you throw a stone and it makes waves then you fall, it's fun'. Another girl, Lila

(aged 11), says that she has built a den with her friends on the forest path that leads into their village, and they sometimes stop and play there after school. Some children talk about the different physical and creative activities they can do in a natural setting, like the forest (walking, mountain biking, exploring and discovering), from enjoying hearing birds singing and other sounds of nature to the chance of seeing and meeting animals. Pleasure derived from contact with nature is not limited to those who actively travel to school; children who take the school/public bus also say they enjoy looking at wildlife or the scenery. In such cases, contact with the natural world is more symbolic, and children build a relationship with their natural surroundings based on the representation of what they see on their journey (Kellert 2002).

Conclusion: The Way to School: A Third Place and a Threshold

The way to school can provide children with a space for independence, agency, freedom, discovery, creative play and learning; these are fundamental to a child's healthy development on an individual, social and educational level. As a transitional third place between school and home, it is a special space for socialisation where children develop and cultivate relationships with their peers of different ages, gender and cultures. Meeting other children and sharing experiences at these times make them more open to personal and cultural diversity. If every child comes from relatively specific home and school cultures, they all face the plurality of individual and group identities simultaneously; this is a fertile ground for learning to master and negotiate the rules of socialisation (language practices, respect, tolerance, empathy, etc.). Children are socialising in a time-space in contact with wildlife: it benefits their physical and mental well-being, creating positive effects on their capacity to learn at school and flourish at home. The way to school is far from neutral; it becomes the stage for many activities which contribute to a child's education. In this space-time, children become the main actors in their development and use it to exercise their multiple identities, complementing their more conformed roles in school and at home.

References

Association Transports et Environnement (ATE). Le chemin de l'école: une aventure! Planification et réalisation de chemins de l'école sécurisés, 2010. Descriptif de colloque.

Bell, Nancy. 'Ethics in Child Research: Rights, Reason and Responsibilities'. *Children's Geographies* 6, no. 1 (July 2008): 7–20.

Bonnin, Philippe. 'Dispositifs et rituels du seuil'. *Communications* 70 (2000): 65–92. https://doi.org/10.3406/comm.2000.2064.

Brewer, Marylinn B. 'The Many Faces of Social Identity: Implications for Political Psychology'. *Political Psychology* 22, no. 1 (March 2001): 115–25.

Brown, Valerie A., John A. Harris, and Jaqueline Russell. *Tackling Wicked Problems through the Transdisciplinary Imagination*. London: Earthscan, 2010.

Camponovo, Sara. 'Les enfants sur le chemin de l'école: tiers-lieu et agency'. *Revue des sciences sociales* 63 (June 2020): 120–27.

Camponovo, Sara and Zoe Moody. 'Le chemin de l'école: un tiers-lieu vecteur d'apprentissages pour les enfants?' *Revue suisse des sciences de l'éducation* 43, no. 2 (August 2021): 311–24. https://doi.org/10.24452/sjer.43.2.10.

Camponovo, Sara, Zoe Moody, Frédéric Darbellay, Ayuko Berchtold-Sedooka, and Philip D. Jaffé. 'Une approche transdisciplinaire du chemin de l'école : les enfants comme co-chercheuses et co-chercheurs'. In *La recherche centrée sur l'enfant. Défis éthiques et innovations méthodologiques*, edited by Isabel Côté, Kévin Lavoie, and Renée-Pier Trottier-Cyr, 247–73. Québec: Presses de l'Université Laval, 2020.

Calin, Daniel. 'Construction identitaire et sentiment d'appartenance'. Paper presented at the Amphis de l'A.I.S de l'Institut Universitaire de Formation des Maîtres, University of Paris, France, 11 December 1998.

Cartron, Annick. 'Spécificité des savoirs et savoir-faire mis en œuvre dans les relations avec les pairs'. In *Les relations sociales chez l'enfant. Genèse, développement, fonctions*, edited by Annick Cartron and Fayda Winnykamen, 60–84. Genève: Armand Colin, 2004.

Carver, Alison, Ben Watson, Ben Shaw, and Mayer Hillman. 'A Comparison Study of Children's Independent Mobility in England and Australia'. *Children's Geographies* 11, no. 4 (July 2013): 461–75. https://doi.org/10.1080/14733285.2013.812303.

Cheng, Judith C.-H., and Martha Monroe. 'Connection to Nature: Children's Affective Attitude Toward Nature'. *Environment and Behavior* 44, no. 1 (January 2012): 31–49. https://doi.org/10.1177/0013916510385082.

Clark, Alison. 'Ways of seeing: using the Mosaic approach to listen to young children's perspectives'. In *Beyond Listening. Children's Perspectives on Early Childhood Services*, edited by Alison Clark, Anne Kjørholt, and Peter Moss, 29–49. Bristol: Policy Press, 2005.

Clark, Alison. 'Young Children as Protagonists and the Role of Participatory, Visual Methods in Engaging Multiple Perspectives'. *American Journal of Community Psychology* 46, nos. 1–2 (September 2010): 115–23. https://pubmed.ncbi.nlm.nih.gov/20532611/

Clark, Jill, Karen Laing, Lucy Tiplady, and Pam Woolner, ed. *Making Connections: Theory and Practice of Using Visual Methods to Aid Participation in Research*. Newcastle University: Research Centre for Learning and Teaching, 2013.

Clements, Rhonda. 'An Investigation of the Status of Outdoor Play'. *Contemporary Issues in Early Childhood* 5, no. 1 (March 2004): 68–80. https://doi.org/10.2304/ciec.2004.5.1.10.

Corso Talento, Federica. *Mobilità scolastica sostenibile. Manuale ad uso dei comuni, delle scuole, delle assemblee gentiori*. Lugano: Repubblica e Cantone Ticino, 2010. https://mobilitapedonale.ch/wordpress/wp-content/uploads/2016/08/mobilità-scolastica-sostenibile-manuale-1.pdf.

Côté, Isabel, Lavoie Kévin, and Renée-Pier Trottier-Cyr. *La recherche centrée sur l'enfant. Défis éthiques et innovations méthodologiques*. Québec: Presses de l'Université Laval, 2020.

Dartiguenave, Jean Yves. 'Rituel et liminarité'. *Sociétés* 115, no. 1 (2012): 81–93. https://doi.org/10.3917/soc.115.0081.

Fargas-Malet, Montserrat, Dominic McSherry, Emma Larkin, and Clive Robinson. 'Research with Children: Methodological Issues and Innovative Techniques'. *Journal of Early Childhood Research* 8, no. 2 (May 2010): 175–192. https://doi.org/10.1177/1476718X09345412.

Graham, Ann, Mary Ann Powell, Nicola Taylor, Donnah Anderson, and Robyn Fitzgerald, ed. *Recherche éthique impliquant des enfants*. Florence, Italy: Centre de recherche de l'UNICEF – Innocenti, 2013.

Grize, Leticia, Bettina Bringolf-Isler, Eva Martin, and Charlotte Braun-Fahrländer. 'Trend in Active Transportation to School among Swiss School Children and Its Associated Factors: Three Cross-sectional Survey 1994, 2000 and 2005'. *International Journal of Behavioral Nutrition and Physical Activity* 7, no. 28 (April 2010). https://doi.org/10.1186/1479-5868-7-28.

Guérin-Pace, France. 'Sentiment d'appartenance et territoires identitaires'. *L'Espace géographique* 35, no. 4 (2006): 298–308. https://doi.org/10.3917/eg.354.0298.

Guérin-Pace, France. 'Le quartier entre appartenance et attachement: une échelle identitaire?'. In *Le quartier*, edited by Jean-Yves Authier, 151–62. Paris: La Découverte, 2007. https://doi.org/10.3917/dec.bacqu.2007.01.0151.

Haberer, Elke. '*Active Children – Active Schools: Zusammenhänge zwischen Motorik, Kognition und körperlicher Aktivität. Eine empirische Studie zu den Effekten einer in den Schulalltag integrierten Bewegungsförderung in der Primarstufe*'. Dissertation for the award of the doctorate of the Faculty of Education and Cultural Studies Department of Sport Science, University of Osnabrück, November 2010.

Harvey, Margarete R. 'The Relationship between Children's Experiences with Vegetation on School Grounds and Their Environmental Attitudes'. *The Journal of Environmental Education* 21, no. 2 (1990/June 2010): 9–15. https://doi.org/10.1080/00958964.1990.9941926.

Hirsch Hadorn, G., Holger Hoffmann-Riem, Susette Biber-Klemm, Walter Grossenbacher-Mansuy Dominique Joye, Christian Pohl, Urs Wiesmann, and Eisabeth Zemp. *Handbook of Transdisciplinary Research*. Berlin: Springer, 2008.

Hüttenmoser, Marco. *Scendi e vivi. L'importanza del percorso casa-scuola. Un'analisi basata sui disegni die bambini*. Bioggio, 2004. http://www.kindundumwelt.ch/_files/TessinScendiVivi.pdf.

Interkantonale Lehrmittelzentrale (ILZ). *Sicher zur Schule – sicher nach Hause!*. Rapperswil: Interkantonale Lehrmittelzentrale, 2011.

Kaufmann-Hayoz, Ruth. 'Les transports du point de vue des enfants – sur les chemins de l'école primaire en Suisse'. In ATE, *Le chemin de l'école: une aventure! Planification et réalisation de chemins de l'école sécurisés*. Descriptif de colloque, 2010.

Kehne, Miriam (2010). '*Zur Wirkung von Alltagsaktivität auf kognitive Leistungen von Kindern: Eine empirische Untersuchung am Beispiel des aktiven Schulwegs*'. Dissertation for the degree of doctor philosophiae (Dr. phil.) in sports science. Submitted to the Department of Sport and Health Faculty of Natural Sciences, University of Paderborn, 2010.

Kellert, Stephen R. 'Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children'. In *Children and Nature. Psychological, Sociocultural and Evolutionary Investigations*, edited by Peter H. Kahn, Jr., and Stephen R. Kellert, 117–51. Cambridge, MA: MIT Press, 2002.

Le Gall, Julie and Lionel Rougé. 'Osez les entre-deux!'. *Carnets de géographes* 7 (December 2014): 1–22. https://doi.org/10.4000/cdg.496.

Lehman-Frisch, Sonia and Jeanne Vivet. 'Géographies des enfants et des jeunes'. *Carnets de Géographes* 3, no. 12 (December 2011): 1–19. https://doi.org/10.4000/cdg.2026.

Lévesque, Geneviève. 'La gestion des conflits des enfants de 6 à 12 ans'. *Passe-Temps*, May 2019. https://passetemps.com/blogue/la-gestion-des-conflits-chez-les-enfants-de-6-à-12-ans-n4314.

Louv, Richard. *Last Child in the Woods: Saving Our Children from Nature Deficit Disorder*. New York: Algonquin Books, 2005.

Macfarlane, Robert. *Landmarks*. London: Hamish Hamilton, 2015.

Marc, Edmond. 'La construction identitaire de l'individu'. In *Identité(s): L'individu, le groupe, la société*, edited by Catherine Halpern, 28–36. France, Auxerre: Editions Sciences Humaines, 2016. https://doi.org/10.3917/sh.halpe.2016.01.0028.

McDonald, Noreen C. 'Children's Mode Choice for the School Trip: The Role of Distance and School Location in Walking to School'. *Transportation* 35, no. 1 (February 2008): 23–35. https://doi.org/10.1007/s11116-007-9135-7.

Mitten, Denise, Chiara D'Amore, and Janet Ady. 'Human Development and Nature Interaction'. Working Paper (July 2014). https://doi.org/10.13140/RG.2.1.1059.9922.

Moody, Zoe, Frédéric Darbellay, Sara Camponovo, Ayuko Berchtold-Sedooka, and Philip D. Jaffé. 'Children as Co-Researchers. A Transdisciplinary and Participatory Process'. In *Ethics and Integrity in Research with Children and Young People*, edited by Grace Spencer, 151−65. UK: Emerald Publishing Limited, 2020.

Morrow, Virginia. 'Ethical Dilemmas in Research with Children and Young People about Their Social Environments'. *Children's Geographies* 6, no. 1 (July 2008): 49−61. https://doi.org/10.1080/14733280701791918.

Murray, Lesley. *The Journey to School: Research Findings*. UK: University of Brighton, 2007.

Myers Jr., Olin Eugene, and Carol D. Saunders. 'Animals as Links toward Developing Caring Relationships with the Natural World'. In *Children and Nature. Psychological, Sociocultural and Evolutionary Investigations*, edited by Peter H. Kahn, Jr. and Stephen R. Kellert, 153−78. Cambridge: MA: MIT Press, 2002.

Oldenburg, Ray. *The Great Good Place: Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You through the Day* (2nd Ed.). New York: Paragon House, 1999.

Pedestrian Mobility Switzerland. *Sur le chemin de l'école. Informations et astuces pour les parents*, 2016. Zürich. http://schulweg.fussverkehr.ch/wp-content/uploads/Schulweg_FR.pdf.

Poretti, Michele. *Enfances urbaines et politiques publiques. Regards croisés d'enfants de différents quartiers de la ville de Sion*. Genève: Université de Genève, 2016. https://www.unige.ch/cide/files/2614/6123/0976/Enfances-urbaines-et-politiques-publiques-final-2016.04.15.pdf.

Porter, Libby, Ceridwen Spark, and Lisa de Kleyn. 'Navigating the Neighbourhood: Gender, Place and Agency in Children's Mobility'. *Children's Geographies* 19, no. 3 (July 2020): 339−50. https://doi.org/10.1080/14733285.2020.1787950.

Powell, Mary Ann, Robyn Fitzgerald, Nicola Taylor, and Ann Graham. *International Literature Review: Ethical Issues in Undertaking Research with Children and Young People*. Childwatch International Research Network, 2012. https://resourcecentre.savethechildren.net/publishers/childwatch-international-research-network.

Rivière, Clément. ' "Les temps ont changé". Le déclin de la présence des enfants dans les espaces publics au prisme des souvenirs des parents d'aujourd'hui'. *Les Annales de la Recherche Urbaine* 111 (2016): 6−17.

Schnugg, Claudia. 'Setting the Stage for Something New. Understanding Arts-Based Initiatives through the Lens of Liminality and Rites of Passage'. *Zeitschrift für Kulturmanagement* 4, no. 2 (December 2018): 77−102. https://doi.org/10.14361/zkmm-2018-0204.

Schugurensky, Daniel. ' "Vingt mille lieues sous les mers": les quatre défis de l'apprentissage informel'. *Revue française de pédagogie* 160 (July 2007): 13−27. https://doi.org/10.4000/rfp.583.

Servais, Véronique. 'La relation homme-animal. La relation à l'animal peut-elle devenir significative, donc thérapeutique, dans le traitement des maladies psychiques?' *Enfances & Psy* 35, no. 2 (2007): 46–57. https://doi.org/10.3917/ep.035.0046.

Skår, Margrete, and Erling Krogh. 'Changes in Children's Nature-Based Experiences Near Home: From Spontaneous Play to Adult-Controlled, Planned and Organised Activities'. *Children's Geographies* 7, no. 3 (2009): 339–54. https://doi.org/10.1080/14733280903024506.

Sobel, David. *Children's Special Places: Exploring the Role of Forts, Dens, and Bush Houses in Middle Childhood*. Tucson, AZ: Zephyr Press, 1993.

Stawiarski, Marcin. 'Rien que des seuils: Réflexion sur l'esthétique de l'interstice dans les œuvres de Gabriel Josipovici'. *Conserveries mémorielles* #7 (2010). https://journals.openedition.org/cm/451.

Thompson Klein, Julie, Rudolf Häberli, Roland W. Scholz, Walter Grossenbacher-Mansuy, Alain Bill, and Myrtha Welti. *Transdisciplinarity: Joint Problem Solving among Science, Technology, and Society. An Effective Way for Managing Complexity*. Basel: Springer, 2001.

Todd, Liz. 'Critical Dialogue, Critical Methodology: Bridging the Research Gap to Young People's Participation in Evaluating Children's Services'. *Children's Geographies* 10, no. 2 (April 2012): 187–200. https://doi.org/10.1080/14733285.2012.667919.

Torres, Juan. 'Why Is It Important to Provide Child- and Youth-Friendly Streets?' In *The Routledge Handbook of Designing Public Spaces for Young People – Processes, Practices and Policies for Youth Inclusion*, edited by Janet Loebach, Sarah Little, Adina Cox, and Patsy Eubanks Owens, 52–63. New York, NY: Routledge, 2020.

Turner, Victor. 'Liminality and Communitas'. In *The Ritual Process. Structure and Anti-Structure*, edited by Victor Turner, Roger D. Abrahams, and Alfred Harris, 94–130. New York: Aldine De Gruyter, 1969.

Winnykamen, Fayda. 'Développement, apprentissages et interactions sociocognitives'. In *Les relations sociales chez l'enfant. Genèse, développement, fonctions*, edited by Annick Cartron and Fayda Winnykamen, 109–51. Genève: Armand Colin, 2004.

Chapter 2

WALKING THROUGH MUNDANE LANDSCAPES: CHILDREN'S EXPERIENCE OF PLACE DURING THE SCHOOL JOURNEY

Sofia Cele
Department of Social and Economic Geography, Uppsala University

Introduction

In an increasingly hectic world, the places children move through as part of their everyday geographies become more and more important. The school journey is particularly interesting from this perspective as it serves as an entry point to children's mundane geographies and reveals the specific contexts in which children live their lives. How children get to school, whether they are able to walk on their own or are taken by car as well as the design of the neighbourhood shape how children can engage with their community.

This chapter focuses on children who walk to school. It highlights that what might seem as a rather unremarkable everyday walk to school has substantial meaning and affects identity processes, belonging and relationship to place through the many entanglements that occur between the child and place. The text is based on fieldwork performed in Stockholm, Sweden, and draws on several research projects on children's environments and participation in urban planning (Cele 2006, 2015, 2019). This contribution focuses on children who walk unaccompanied by adults in urban environments. The interest of this study lies in the fact that if children can move around on their own, they are autonomous in their social and environmental relationships, which shape their identity, their relationships with place and their understanding of the world.

This text focuses on how the school journey provides an excellent opportunity to engage with the local environment. The three concepts *encounters*, *interactions* and *relationships* are central to the chapter. These concepts are a starting point

for describing how place experiences unfold during children's walks to school. While walking the environment presents itself to the child through various *encounters* that can be social, material or sensory. Through these encounters, some of which are transient whereas others are more important, the child *interacts* with the surrounding world. The concept of interaction stresses the importance of a physical and embodied meeting between the child and place. Through this interaction, *relationships* are formed with the material world, the people, the community as well as with plants and animals. Some of these relationships are physical interactions or social encounters, but it is important to recognise that some of these relationships partly take place within the child. They are formed through interaction, but this can also involve seeing or meeting something or someone without necessarily interacting with them directly. Despite not always being visible, these interactions and relationships play an important role for the child's connection to place and community involvement (Bourke 2017; Cele 2019).

Walking is the physical activity that forms the backbone for this chapter. Walking is as much means of transportation as it is a means of experiencing and connecting with place. Children's walking is – to some extent – different from adults' way of walking, but what it has in common is that walking across a landscape involves a variety of encounters and interactions – some of which are repetitive and predictable and others not.

The contribution is structured as follows: first, the methods used for working with children are described. Thereafter, research on children's access to their local environment is presented as well as the meaning of place as a theoretical concept and as a physical reality. The term autotelic process is introduced to describe how children interact with the materiality of the environment and how materiality encourages children to play. The activity of walking is used to show how children encounter, interact and form relationships with the materiality, people, plants and animals of their neighbourhoods, and how children's everyday geographies can unfold as deeply meaningful.

Place-Interactive Methods for Understanding Relationships to Place

The chapter is based on empirical material from several research projects undertaken with children in urban environments in Stockholm, Sweden. One hundred and twenty children were involved in the various research projects presented in this chapter. They were between 6 and 12 years old, but the majority were either 8 or 11. The children attended three different schools in central Stockholm, and they all lived in high-rise buildings in densely built urban environments. All except 10 children lived within walking

distance from their schools. The children who had longer journeys travelled with public transport such as the bus and underground, and they walked from the station to their schools.

The concept of 'child' is both useful and problematic. The term is useful because it highlights the interest of a group with similar needs and expressions. It is problematic for almost the same reason. Children are individuals, just like adults, and their views, feelings, wishes and fears vary considerably within and beyond age groups. This must always be remembered. However, as a group with a limited voice in society, there is still a need to talk about them as 'children', provided that we really listen to what individual children express and make their voices the foundation of what 'children' stand for (Alderson and Morrow 2020).

Fieldwork with children was conducted in all of these projects, using qualitative multi-methods approaches, comprising walking interviews, auto-photography, drawings, interviews and focus groups as central methods. A central aspect of this methodological approach is to talk with children about their places from within their places. Place experiences are fluid and temporary as they are triggered by interaction with place; therefore, it is key to be out in the environments discussed while using at least one, if not several, of the methods.

In the text, reference is made specifically to (1) walking, (2) photography and (3) drawing/map-making. When walking was used as a method, the research was conducted with children in small groups to have them describe and show the route they take to and from school. This was both formal, in that the route and the participation of children were predefined in terms of where they live, and informal, in that the children were given a great deal of freedom to show place and deviate from the specified route in various ways. The atmosphere of the walks was informal with children playing and chatting as they revealed their everyday geographies. Walks were taken through city streets, but also through parks and residential courtyards, which made their character variable.

There were numerous situations where individual children had the opportunity to take the researcher aside from the group and tell things in person without the rest of the group listening. Individual walks were taken with some children. This was mainly for practical reasons, if they could not join the group walks. The difference between these two set-ups is that during the group walks the interactions between children spurred them to point out places they find exciting and interesting. Conversation between children also provided interesting insights, but there were more difficulties connected to documenting what happened during the walks as recording becomes problematic when children move around more. Such documentation was carried out using

a camera and taking notes. Talking a walk with one child only is more peaceful and the conversation is deeper and on a more personal level. The knowledge gained is more related to the child's thoughts and feelings, but it may also be slightly more challenging for the child to be alone with a researcher. During the group walks, children can hide more naturally behind play and activity, and if they do not want to speak about something, they can run away and play. Interviewing a child alone induces more expectations that they should stay with the researcher and continue the conversation; even after having made it clear that it is perfectly acceptable not to do this (Hill 2006; Punch 2002).

Auto-photography was also used. The advantage of this method is how it can be carried out over a longer time period, such as a week. The children took pictures using their mobile phones or a disposable camera that was provided, of the school routes or local environments. Once the photos were developed, with the photos in hand, interviews were carried out with the children and they were asked to describe the photo and why they took it. Their answers then led to follow-up questions about their everyday life and environment.

This chapter is also based on knowledge gained from drawings and map-making of children's school journeys. The children were asked to make A3 drawings of their way to school. It could be either maps or drawings, and most children did a combination of these two. They could use watercolours, crayons, pencil or acrylic paint. Some children also used a ruler if they made a map. They were very pedagogic in explaining how it should be understood by using symbols like arrows to show direction and smilies to display values connected to the environment. Each drawing and map were followed by a conversation with the child about what he or she had drawn.

Children's Access to Their Local Environment

The way in which children are allowed to spend time outdoors and the degree of authority they have over their mobility and outdoors play vary across time and places. How these boundaries are set is shaped by social understandings of children, parenting and the type of environment the children live in (Karsten 2005). These conceptions are related to the physical environment, but it seems as if the social conceptions of what is acceptable are to some extent more important for this judgement than the actual risks children may face. Therefore, children's mobilities and access to local environment must also be understood in relation to norms of gender, ethnicity and the age of the child, which have been found to influence the level of spatial competence, ascribed to the child (Mathisen 2020; Porter et al. 2020; van der Burgt and Cele 2014).

By having access to outdoor environments and being allowed to walk to school children are exposed to various situations, places and people. This exposure results in the ability to deal with these situations, which in turn leads to spatial competence. Children's ability to understand and cope with the urban environment or any public space is often considered age related. Clearly, children's cognitive abilities differ between ages, but research shows that when children have the opportunity to interact with places actively and explore their neighbourhood and other public spaces, individually as well as in groups, they learn how to handle both the materiality of physical places and the social situations that might occur there. It is clear that children's ability to assess risk depends on age and development, but this is not a static relationship and age alone does not define a child's competence to understand his or her environment (Aretun 2009; Cahill 2000; Cele 2006; Harden 2000; Nayak 2003; Tucker and Matthews 2001; van der Burgt and Gustafson 2013).

One of the main reasons why children lack access to the outdoor environment is parental fears of what might happen to them. The irony is that the more restrictions children face in their use of outdoor space, the less competent they become in understanding and dealing with these spaces. Also, small children have the ability to develop a sense of risk if they are allowed to interact with their environment (Christensen and Mikkelsen 2008), but rather than understanding children's spatial competence as connected to experience, adults tend to think only of biological age when talking about risk management (van der Burgt and Cele 2014).

Children are aware that adults define them as incompetent in dealing with public spaces. To some extent children also agree that they sometimes need help, but to a larger extent, children who are allowed to move about outdoors often see themselves as spatially competent (van der Burgt and Cele 2014). Research shows that children often describe difficult situations, either social or material, in relation to also displaying their competence and describing how these situations should be dealt with (Cele 2006; Nayak 2003; Tucker and Matthews 2001; van der Burgt 2013; van der Burgt and Cele 2014).

Lately, there has been extensive discussion on children's reduced access to their neighbourhoods and the decline in children's independent mobility (Alparone et al. 2012; Nansen et al. 2014; Wales et al. 2021). As the physical and sociocultural environment changes, children's access to outdoor play in urban environments has decreased, and this seems to be happening in various countries simultaneously (Alparone et al. 2012; Horelli 2001; Kyttä et al. 2015; Nansen et al. 2014; Wales et al. 2021). Social insecurities, increased densification and commercialisation of public spaces are key reasons for this decline. As Bourke (2017, 93) puts it, children are 'drifting away from the public domain. The culture of driving children to school and after-school

activities has also accelerated, as have the sociocultural fears regarding children being outdoors in public spaces (see also Karsten 2005; Kyttä et al. 2015; Valentine 2004).

In this context, it is important to highlight the rich experiences that walking to school brings to children. Walking – particularly the slow and sometimes diverted character of children's walks – is the opposite of the demands of modern society. A dreamy walk to school does not instantly lead to major scholarly achievements or self-improvement, but it does provide children with connections to community and, as Ross (2007, 374) puts it, 'the opportunity to engage in the local environment as part of the everyday routine'. Something as simple as a walk to school can give children time for contemplation and exploration of the surrounding world that forms the basis of identity and relationships with both the community and the self.

Although there is an increasing narrative surrounding the dangers of letting children walk to school independently, there are also parents who see walking to school as a benefit (see Chapters 8 and 9 in this volume). Similarly to what Ross found in her study in Fife, Scotland, Swedish parents also view walking to school as a means through which children acquire responsibilities, develop time and risk management skills and make independent decisions (Ross 2007; Wales et al. 2021), but also as something that can involve play and time with friends.

In Sweden, urban environments have undergone a substantial transformation over the last 20 years with the built environment becoming increasingly dense and the access to open and green spaces decreasing (Littke 2015). Changes in the school system have also allowed parents to choose their child's school freely, regardless of where they live, leading many children to travel long distances to school, even when they are very young. However, from an international perspective, Swedish children still enjoy a high degree of freedom to move, including in urban environments, and many children still walk or cycle to school, on their own or in the company of family members or friends. The extent to which this happens depends on a variety of factors ranging from the physical and social environment to the cultural understanding of health and broader benefits of physical exercise and outdoor play (Wales et al. 2021).

Place

The ways in which places are understood and interpreted determine how we can understand children's experiences of their school journey. In geography, places are understood to be more than simply location and material objects: they include relationships between the individual and

his or her surrounding world. It is in the meeting between humans and environment that experience of place takes shape. How this experience unfolds depends on a number of things. Individual preferences, the design of place and the way material objects are used are of course fundamental. Social relations, social control and social expectations also shape belonging and similarly how other people perceive you as belonging or not belonging to a place. Ethnicity, gender and age are typical aspects that have impact on how you feel you can use a place and how other people's expectations of you can be expressed as a form of social control as these aspects often are connected to ideas of who belongs to a place and who does not (Mathisen 2020; Porter et al. 2020).

There are of course both similarities and differences between how adults and children experience places. The body encounters the world similarly independent of age and children's bodies react much in the same sensory way as adults' bodies, although we interpret and understand these experiences in different ways depending on who we are (Colls and Hörschelmann 2009; Horton and Kraftl 2006; Rautio 2013). The relatively obvious aspect of children being smaller in size affects what they see and how spatiality unfolds before them. Children also use their body in a more active way than adults. Physical interaction with material objects, houses and plants is sensuous and embodied. It is felt, heard, seen and even tasted. Artefacts such as monuments, statues, benches, lamp posts and other mundane objects are explored through climbing, touching or balancing on them 'because it is possible' as a 10-year-old girl explained to me during a walk. Places are explored, tested, felt and lived actively. Another common thing for children to do is to try out different perspectives and paces to see how places look from above or from below (such as looking at a street from a recessed basement window), when running as fast as you can or when sitting down.

How places are experienced depend on how it is possible for a person to interact with them. Often places are connected to social expectations and regulations that shape how the relationship is formed. I approach the school journey as a liminal space, a threshold between the home and school environment. This means that although the school journey occurs within a social context and attached social expectations, it is also a transitional space between home and school where the child can create autonomous place relationships and subjective experiences (Shortt 2014). This transition between two dominant spaces, the in-between of home and school, is important for exploration and identity formation, as it facilitates the child's autonomous interaction with places without being tied to the social structures and processes of the home and school environment (Schnugg 2018). This opens up for the child's subjective place relationships.

Autotelic Processes

The meeting between the child and the environment is characterised by a variety of processes, interactions and encounters. Although many, or perhaps even most of them, may seem so mundane and trivial that it is difficult as an adult to understand the engagement many children show in them. In the research material, there are many examples of these activities referred to as play but often also seen as a waste of time by adults: collecting stones, poking on things with a stick, throwing gravel in the air, the seemingly pointless activity of standing and looking at things for an unreasonable long time, climbing and balancing on everything from brick walls to statues, to trees or the pure joy of finding a place to hide behind the garbage bins.

Rather than simply calling it play (or a waste of time), it is suggested, in line with Rautio (2013, 394) that 'autotelic process' is a useful concept for approaching these activities. Put simply, this can be understood as activities in which individuals engage because they are internally motivating. The activity, as Rautio writes, is 'the goal and the reward in itself'. What matters is that these activities are triggered at the meeting point between place and child. The child's desire to explore and interact meets the material world, and the character, material or simply the existence of material objects triggers the need to engage with them. To use the words of an eight-year-old boy: 'it called to me. It needed to be played with' or in the words of Rautio (2013, 394) when she describes her sons play with her pin-cushion 'it was as much my son playing with the pins as it was the pins playing with my son, as if asking to be played with'.

Two other interrelated aspects are linked to this process. First, children more easily express what Nieuwenhuys (2011) and Rautio (2013, 395) call to 'anthropomorphise' or 'humanise' their non-human surroundings. The limitations of such terms are that they insinuate (maybe unintentionally) that children make things up when, in fact, the relationships that children form with objects or plants can have deep meaning and can also be expressed as friendships (Cele 2019; see also Chapter 1 in this volume).

A second aspect is the important process that children engage in when they experience places and that Bennett (2010; see also Rautio 2013) calls aesthetic-affective openness towards material surroundings. It is about being open and attentive to materiality, plants and animals and connecting to them through sensory impressions and enchantment. It involves being present and feeling with what is beautiful and good. Often, but not always, this also means giving a role to plants and animals in ways that adults might find naïve, but which forms the base of connection, affection and love for these subjects as well as a deep connection to place. Enchantment is often expressed by children through their narratives

and this can be anything from loving a particular house because the colour of the façade is beautiful, just as this 10-year-old boy expressed 'When the sun shines on that yellow house beside the green tree there are so many colours there and I love looking at it. I want to stay there because it is like the world is nice' or as the 11-year-old girl described her favourite tree: 'This tree is my friend and it makes everything feel like magic'. This could also be expressed as sitting on the ground to admire the beauty of a flower or changing the body language and moving with care and wanting to stay close to what they found beautiful (Cele 2019). This openness to beauty and the willingness to connect with and feel the materiality of place is deeply meaningful to the children and forms strong bonds with place and a willingness to care for the environment.

Walking

The most primary and obvious aspect of walking to school is the walking in itself and how this activity affects the child and her or his experiences during the walk. Walking has been the subject of much debate and writing. The relationship between walking and health, creativity and productivity are some of the topics discussed, but also how walking affects the experience of landscape (Lorimer 2011; Ratnam and Drozdzewski 2020; Solnit 2000; Wylie 2005). Children's walking practices are seldom connected to these discussions, but a brief glimpse into children's walking reveals the diversity of benefits and joy that this activity can contribute with.

In one of the first projects, walking was used as a research method. The researcher was struck by how the way she walked affected her experiences during the walk and the effect it had on her. For a child, depending on her or his age of course, walking seldom means the rational activity of moving from point A to point B, as it might mean to an adult. Obviously, walking is a means of transport for children, but it also means so much more.

When a child is asked what he or she does while walking to school, the answer is often simply 'I just walk…'. However, observations highlight that this walking might mean balancing, collecting objects, looking at things while kneeling, hiding, climbing, rolling down a slope, fighting fictive monsters or observing birds, flowers or building sites. There are myriads of activities and experiences summed up in that little word of 'walking'. Some of these activities are very obvious physical activities, such as climbing or balancing, running and hiding, but many are much more discrete and difficult to observe. It is known that walking and strolling stimulate free-moving thought processes and that experiencing various places triggers memories and fantasies about places (Bourke 2017; Cele 2006; Ross 2007). Memories are very common

when children talk about their neighbourhood, whether it is where they used to live or where something happened ('this is the EXACT spot where I dropped my ice cream last summer' as a nine-year-old girl explained) or where a memorable activity took place, such as spotting a hedgehog in a city park. But walking also provides the possibility to fantasise and the environment and the kind of encounters being made there trigger these fantasies.

Often this involves places that are mysterious, scary or just out of the ordinary and it also often involves mixing reality with fiction. This can involve making up stories about strange shops, as this eight-year-old boy did: 'look at this shop, there are so many weird things here, and it's dark … so I often make things up about it … but it might also be true that there is something scary going on there'. Places that scare or frighten the children are also commonly included in place-based stories and this activity also seems to encourage children to push boundaries and explore what might be mysterious or weird. Often this involves mixing real-world experiences with fictional stories. In these research projects, this has often involved C. S. Lewis' Narnia series and J. K. Rowling's Harry Potter as well as various computer games. The specific fictional pieces lack importance here, but the important thing is how place triggers these narratives and how this connection is deeply meaningful and adds to the identity of both child and place. This could be spotting a lamp post that looks like the lamp post from the Narnia books or the magical alleyway in Harry Potter and feeling that there is a connection between the real world and the fictional world. It becomes part of a meaning-making activity. This mixing of boundaries and exploration of factious and fictional worlds is a rich experience, and, rather than being seen as a waste of time, it should be recognised as important for identity and place attachment, dreaming and fantasising while walking to school.

In these projects, children were aware of the importance of thinking, daydreaming and 'just being left alone in the head' as one 10-year-old boy expressed it, and they actively refer to it as an important activity. They also call this process as 'having their heads to themselves and thinking time' something which also was found by Ross and identified as a place of solitude or an opportunity to 'just dawdle along' (2007, 382). This active but also abstract activity forms the base of the calm explorative mood many children seem to enter while walking and through which they form relationship with their everyday spaces and the various subjects that inhabit them.

Encounters and Interactions

How children interact with what they encounter also varies, from direct and embodied physical interaction to more abstract inner interaction with place. Walking, although happening in the present day, is connected to memories

and associations from other walks and other places. Memories and feelings are always present and triggered by the encounters made while the children walk. The encounters that children make and the possibilities that these encounters trigger lead to detours and interaction with specific objects and features that stimulate their minds (Cele 2006; Ratnam and Drozdzewski 2020). Walking can simultaneously be understood as a merging between the self and the surrounding landscape and sometimes as if there is a clear distinction between these two (Wylie 2005). This means that how and what is experienced and felt can simultaneously be deeply material and concrete, as well as abstract and ethereal (Cele 2006; Wylie 2005).

The physical environment shapes the experience of a particular place and the pace affects what one sees and encounters. Standing still is a different experience than moving slowly or running. What one sees, hears and is exposed to depends on this very basic material interaction between the individual and the surrounding environment. As Wylie (2005, 243) puts it, 'landscape is neither something seen, nor a way of seeing, but rather the materialities and sensibilities with which we see'. Experience is shaped by materialities to our sensibilities. It is what happens between, in this case, children who walk to school and the places that they walk through that constitutes an experience. One walks in a physical landscape, but the materiality of what one encounters interacts with the self through memories and feelings.

Navigating People and Place

In narratives of school journeys, children highlight the richness of the experiences they have when they independently negotiate their everyday encounters (Ross 2007, 377). Being able to interact with places, people and objects creates an experience that leads to confidence and competence. Walking to school is an opportunity to include these experiences in children's everyday geographies. The encounters and interactions that children face on their way to school are useful because they follow a familiar pattern: which way to take, how to behave and to some extent whom to meet. Simultaneously, there is also a level of uncertainty and new experiences and challenges within this familiarity. The balance between familiarity and new experiences depends on the environment and how intense it is with people and traffic. But also in the urban context of inner-city Stockholm children describe how their school journey is characterised by familiarity based on the route to walk, the sounds and sights they encounter as well as the places where they meet or see certain people and animals.

Walking to school means navigating a specific route and finding the way between home and school. It also means navigating the social structures

that shape the places walked through. The children describe the walks as something between being surveyed and controlled by adults and being free to roam independently (Ross 2007, 388). The children walked independently or in the company of friends, and they used this freedom to play and make detours from the established route, but they were also aware of the social structures of the surrounding community. These structures could be experienced as restrictions, but children also see them as safety. The presence of adults can provide the children with a sense of security and belonging, even if these adults are unfamiliar to them. The possibility of getting help when needed feels safe.

Repetitive routines of people mean that children often meet or see the same individuals every day. In many cases, the physical layout of streets, the colours of houses but also smells and sounds are used for a sense of place and orientation. The everyday routines of people and animals are used as reference points for finding one's way and feeling connected to a place. Often children describe how they meet the same people on the way to school and these can be labelled as 'the man with the cigarette', 'the lady with the dog', 'the man outside the bakery', and 'the flower shop dude'. This overlap of children's daily routines with these other people's routines provides a sense of safety, even if the children have never interacted with any of these people in person. This confirms to children that they belong to a place and reassures them that they are walking the right way to get to school.

The act of navigating geographically was often taught to children by parents who walked with them between home and school. This means that children learnt how to walk and how to behave during that walk. This could refer to traffic rules, walking pace and how to better deal with social situations such as homeless people, other children and if necessary, how to go into a shop or on the bus on their own.

In describing how they remembered the way between home and school many children evoked living nearby and having walked this route 'a thousand times'; they knew it really by heart. Other children described something like what the children in Wales et al. (2021, 187) express as 'having a map in the brain of how everything looks'. Often this involved having landmarks along the way that help and confirm whether they are on the right way and where to turn or to walk to. These landmarks were often connected to memories, such as remembering where something happened and therefore recognising where you are. They can also be a smell, such as a bakery, which many children mentioned. They knew by the time they could smell newly baked bread that they were at the crossing where they should turn left. Some children also used sounds of construction works or traffic as signs they were on the right route.

Although all children said that they had been told not to speak to strangers, some children ignored this. For some children, this meant finding adults in the neighbourhood with whom they had contact on their way to and from school. This was the case for one 11-year-old boy who often went to a small kiosk, which was run by a man. The boy explained: 'He is there every day. I walked in there to buy sweets one day and he talks to me. So, I go there often. He is old and from Turkey and I sit there a while before I go home. He asks me how school is. He tells me to do my homework and then he gives me a sweet. He is nice. I like it there'.

This informal and repetitive interaction between the boy and the man in the shop gives the boy a sense of security and belonging to the community. The interaction between them is on the boy's terms. He walks in there if he feels like doing so, but there is no pressure to interact, and he can leave whenever he wants. The man makes him feel welcome and asks him friendly questions to make sure he is fine. Another example was a 10-year-old girl who often joined a woman who walked her dogs on the same route the girl took to school. They often walked together 'for a while' and talked about the dog and things they saw around them. These types of mundane interactions with other people are described by the children as casual and safe friendships that do not demand anything from them but are experienced as pleasant and function as anchor points in the children's connection to their community.

Although school walks also can involve negative aspects such as bullying, pollution and traffic, the ability to interact with the environment is important for children's well-being and provides them with a sense of attachment and confidence. Being able to negotiate and deal with negative aspects are, to a reasonable degree, also part of learning how the community and environment function, and how you should act about what is frightening or negative. When children speak about dangers and what they are afraid of, they most commonly mention other children and various social situations. Many children have strategies for how to behave when they meet a group of older children or when someone they do not like leaves the bus at the same stop as they do. Although this can seem unpleasant, it is also important to be exposed to situations that need to be dealt with and solutions to be found. During interviews, several children expressed pride in knowing 'how to get away from tricky things and out-smarting the older ones', as an eight-year-old boy described it. The children talked about this in a way that revealed that they saw their environmental knowledge as crucial in order to deal with potentially frightening situations. 'If you know your escape routes, you can always get away' said one 10-year-old girl. This could mean knowing things to climb on to, such as trees, statues and walls, as well as places to hide, such as gates you push yourself through and unlocked doors to hide behind. It also often

involved knowing shortcuts such as how to run between residential courtyards without entering the street or through which shrubs you could run to escape from people. The playful explorations children do of their environment later result in knowledge that they use in situations that seem uncertain or frightening.

Materiality

A fundamental aspect of walks is that children move through a material world with various artefacts and natural objects. The meeting between the child and these objects and subjects is the basis for how place experiences are formed. A crucial aspect for understanding children's experiences of place is how this 'mesh of related bodies (human and non-human)' (Rautio 2013, 396) affects and interacts with the child. How and why do objects and subjects like stones, paving, walls, trees, gates, things lying on the street, monuments, signposts, flags outside shops and pigeons on the roof matter to children?

Children's experiences of place are rooted in the meeting between the body and material world. Physical interaction with place is essential to understanding how things matter, but also the associations and ideas that this interaction triggers for the child. Many children narrate openness to their surrounding world, where places and materiality are loaded with meaning and attachment. Places can be meaningful because they are interesting and fun, but they can also carry meaning just because they are part of everyday life. Regular meetings or observations of specific places and things are also meaningful simply because the child is able to notice their existence repeatedly. There is safety in the trivial repetition of things and routines.

While walking, children also take notice of things that adults tend to ignore or do not see the meaning of. Collecting objects from the pavement or the park is an example that many children describe as important or alternatively that they do 'without thinking' during their walks. These are examples of the autotelic processes previously mentioned. There is no other interest in collecting rubber bands, sticks and stones or picking dandelions from cracks in the pavement than that to feel good and have fun.

However, it is argued here that this openness to place, this search for things to enjoy or use, is actually the basis for creativity and connection to place. In reading work on the relationship between the artist's studio and the surrounding environment (Sjöholm 2010), the author of this chapter came across an example where the artist in that study and a child in her study (Cele 2006) behaved almost exactly similarly. One of the artists collected rubber bands lying on the street and brought them to the studio to be included in the artwork. In the author's fieldwork (Cele 2006), a boy found rubber

bands on the street and picked them up to later use them together with friends when they were playing further along the street. This activity is about being open to what one encounters in the environment and reacting positively to things one is attracted by. If one likes the object, the opportunity will arise to use it. 'It might be a good thing to have', as the boy in this study explained about collecting objects. This behaviour is common and performed by almost all children albeit in a variety of forms and expressions. This can range from collecting things that can be used for active play, as in the case of the rubber bands, but it can also involve collecting things that are beautiful or special such as small stones, a flower or a beautiful leaf. In these latter cases, the objects were kept in the pocket and brought home or shared with a close friend. The important aspect here is that in such autotelic processes, the activity has no particular point, except that it is fun and meaningful, and its indefiniteness is what brings it joy. It is the constant interaction between the child and the environment that triggers this particular type of seeing. For the children who are accustomed to a specific environment, as they become when they walk there every day, they notice details, changes and learn how to make use of the environment they are in. In short, this is how one becomes part of a place and a community, how one develops spatial competence and how a child learns to navigate in his or her environment. Exploration, investigation and play are key ingredients in learning the formal and informal rules and characteristics of a place.

Plants and Animals

Plants and animals are important to children also in urban landscapes. In describing their relationship with places, they are commonly mentioned and often in relation to care, affection and concern for the safety of these subjects. The children also often describe how they appreciate the beauty of plants and how they find old trees enchanting. Plants, as well as animals, are also mentioned because they represent something different from the urban environment. Children are interested in how plants and animals can survive in a city, which adds interest and mystery to these subjects.

How much plants and animals matter varies between children. Some children care less, but for others, the experiences of meeting animals in the city are so special that they form a place identity. One 11-year-old boy talked extensively about a hedgehog he had seen in a specific corner of a park 'a few years ago' and how he thought of this hedgehog every time he passed in this particular place. This memory was so strong that he actually used it as a point of reference to find his way and also to describe the place to his close friends and family: it was now called 'the Hedgehog Corner'. But his thoughts about

the hedgehog were not simply a curious incident in the urban environment. It was also connected to a special feeling as he was the only one who had seen it, as well as concern and sadness as he wondered how it would find food and shelter to survive. One 10-year-old girl described how she walked past a hedge where 'There are all these tiny little birds, but I know now they are tree sparrows, and they make me sooo happy when I walk there'.

The constant chitchatting of the sparrows in the hedge and the fact that she could walk past them so closely that she could clearly see them made her happy. It was also, as in the previous example, a very clear reference point not only for orientation but also in her overall everyday geographies. Every day, she walked past this hedge and every time it made her happy. Birds are often mentioned, possibly because they are one of the most present animals in the city. One boy walked down a street where there are trees planted on both sides of the road. During the walk, he told the researcher that, by chance, he had seen that there were birds' nests in the trees. So, whenever he walked along this street he checked where there might be bird nests and now claimed to know 'where almost all the birds' nests in this area are'. When he took part in the auto-photography session in which children were asked to take pictures of places in their neighbourhood, the boy presented 42 photographs of trees with birds' nests.

This exemplifies how experiences of nature matter to children also in urban environments, but also the importance of their individual experience of place. For most children, this appreciation of nature was not something they actively shared with their friends, but rather something they experienced and enjoyed on their own, almost as a secret. These mundane relationships and connections to their neighbourhood made the interaction with place special and there was also anticipation and feeling of care for the animals connected to these experiences.

Domestic animals are also important, and many children describe particular dogs and cats they meet on their way to school. As dogs are more frequent than cats on urban streets, they are also more common in the children's narratives. Cats are also present, although sometimes just sitting in windows looking out on the street from the first-floor apartments. Some children, mainly girls, were able to describe the location of several dogs in the neighbourhood, their names, age and owners. In a mapping exercise where the children drew maps of their school journey, some girls included dogs they knew, rather than visual monuments in the area or street names. Almost all children used their experiences and relationships as reference points rather than landmarks and street names.

Plants, like animals, are also very present when children describe how they interact with and connect to place, during their way to school. This is done in many ways and refers to large trees, herbaceous perennials, shrubs, plantings

in parks and weeds growing between paving slabs. There are numerous values connected to plants, such as being seen as beautiful and pleasing or having a deeper meaning. Flower shops are also mentioned as particularly beautiful and important, and some children liked to divert their route on their way home from school in order to walk past a flower shop. They described how the beauty and colour of the flowers made them feel happy.

How plants are mentioned and how the children relate to them depend on what type of plant it is. Common for all of them was the aesthetic-affective expression with which the children engaged with the plants. They describe them as beautiful and as *good things*, but there are also aspects of a desire to connect with the plants, to be close to them and to feel them. There is an aspect here that can most closely be described as enchantment. Children describe how they value beautiful things and want to take care of them. This is most apparent in relationships to old trees. Many children describe old trees as particularly important because they are big, 'have lived history' and that they are beautiful. Some also mention that trees and other plants are important for birds, and this is a positive aspect. Some children have specific trees with which they have established a very strong connection and they even talk about these relationships as friendships. This is sometimes connected to being able to climb the tree and find a space of solitude, but it can also be an ordinary large tree in a park (Cele 2019).

Conclusion

Throughout this chapter, it has been highlighted how the mundane geographies children move through in their everyday lives shape the relationship with their communities was highlighted. The focus on children's school journeys shows the structures between which children live their lives, both in terms of the sociocultural context and in terms of accessibility of the physical environment for children.

As children's possibilities to cultivate an autonomous relationship with their neighbourhoods and communities decrease due to restrictions on their independent mobility, it is important to remember the importance of the way to school. When societal discussions about children in public spaces tend to focus on fear and the dangers to which children can be exposed, it is also important to remember that there are dangers involved in restricting children's ability to interact with the neighbourhood as well.

The school journey functions as a liminal space, a threshold between the social structures of home and the school environment. It is an important space for the child as it provides the ability to create an autonomous and subjective relationship with places. A child's journey to school, however dull

it may seem, means the opportunity for children to encounter, interact and create relationships with the surrounding environment. These experiences are based on embodied and sensuous impressions of the material world. The result is physical activity, creativity and joy as well as identity formation and an increased ability to understand their environment. The play, the detours, the stopping to look and the conversations with friends that take place during walks all represent values that are threatened when children's mobility and access to urban environments decrease.

I argue that it is necessary to recognise the importance of these mundane activities for children's well-being. Children have a right to connect to their surrounding environment, and something as simple as the school journey can expand a child's horizon. It does so by gradually expanding the child's landscape through autonomy in the place relationships that characterise the everyday landscapes. The way to school is the same route every day but in a continuously changing environment. There are constants, such as the physical environment and the continuous rhythms and routines of the community, but the flow of people, traffic, animals, commerce and changes in weather also introduce variation and create new impressions in this stable framework. The relationships that children create with people and places when they are outdoors on their own are fundamental to how they connect to their community, but also to how they cultivate affection and fondness for what they encounter in their everyday geographies.

References

Alderson, Priscilla, and Virginia Morrow. The Ethics of Research with Children and Young People: A Practical Handbook. London: Sage, 2020.

Alparone, Francesca Romana, and Maria Giuseppina Pacilli. 'On Children's Independent Mobility: The Interplay of Demographic, Environmental, and Psychosocial Factors'. *Children's Geographies* 10, no. 1 (February 2012): 109–22. https://doi.org/10.1080/14733285.2011.638173.

Aretun, Åsa. *Ungdomars utsatthet i bostadsområden. Trygghetsprinciper för fysisk planering*. Linköping: University Electronic Press, 2009.

Bennett, Jane. *Vibrant Matter: A Political Ecology of Things*. Durham, NC: Duke University Press. 2010.

Bourke, Jackie. 'Children's Experience of Their Everyday Walks through a Complex Urban Landscape of Belonging'. *Children's Geographies* 15, no. 1 (June 2017): 93–106. https://doi.org/10.1080/14733285.2016.1192582.

van der Burgt, Danielle. 'Spatial Avoidance or Spatial Confidence?: Young People's Agency in the Active Negotiation of Risk and Safety in Public Space'. *Children's Geographies* 13, no. 2 (August 2013): 181–95. https://doi.org/10.1080/14733285.2013.828455.

van der Burgt, Danielle, and Katarina Gustafson. '"Doing Time" and "Creating Space". A Study of Outdoor Play and Institutionalized Leisure in an Urban Family'. *Children, Youth and Environments* 22, no. 3 (2013): 24–42.

van der Burgt, Danielle, and Sofia Cele. 'Barnen och stadsrummet: Relationer mellan kompetens, ålder och delaktighet'. *Sociologisk forskning* 51, no. 1 (November 2014): 29–46.

Cahill, Caitlin. 'Street Literacy: Urban Teenagers' Strategies for Negotiating Their Neighbourhood'. *Journal of Youth Studies* 3, no. 3 (August 2000): 251–77. https://doi.org/10.1080/713684375.

Cele, Sofia. *Communicating Place. Methods for Understanding Children's Experience of Place*. Doctoral dissertation, Stockholm University, Stockholm: Almqvist & Wiksell International, 2006.

Cele, Sofia. 'Childhood in a Neoliberal Utopia. Planning Rhetoric and Parental Conceptions in Contemporary Stockholm'. *Geografiska Annaler. Series B, Human Geography* 97, no. 3 (September 2015): 233–47. https://doi.org/10.1111/geob.12078.

Cele, Sofia. 'A tale of two trees: how children make space in the city'. In *Social, Material and Political Constructs of Arctic Childhoods: An Everyday Life Perspective*, edited by Pauliina Rautio and Elina Stenvall, 1–15. Singapore: Springer, 2019.

Christensen, Pia, and Miguel Romero Mikkelsen. 'Jumping off and Being Careful: Children's Strategies of Risk Management in Everyday Life'. *Sociology* 30 (January 2008): 112–30. https://doi.org/10.1111/j.1467-9566.2007.01046.x.

Colls, Rachel, and Katrin Hörschelmann. 'The Geographies of Children's and Young People's Bodies'. *Children's Geographies* 7, no. 1 (February 2009): 1–6. https://doi.org/10.1080/14733280802630882.

Harden, Jeni. 'There's No Place Like Home. The Public/Private Distinction in Children's Theorizing of Risk and Safety'. *Childhood* 7, no. 1 (February 2000): 43–59. https://doi.org/10.1177/0907568200007001005.

Hill, Malcolm. 'Children's Voices on Ways of Having a Voice: Children and Young People's Perspectives on Methods Used in Research and Consultation'. *Childhood* 13, no. 1 (February 2006): 69–89. https://doi.org/10.1177/0907568206059972.

Horelli, Liisa. 'A Comparison of Children's Autonomous Mobility and Environmental Participation in Northern and Southern Europe – the Cases of Finland and Italy'. *Journal of Community & Applied Social Psychology* 11, no. 6 (November 2001): 451–55. https://doi.org/10.1002/casp.644.

Horton, John, and Peter Kraftl. 'What Else? Some More Ways of Thinking and Doing "Children's Geographies" '. *Children's Geographies* 4, no. 1 (August 2006): 69–95. https://doi.org/10.1080/14733280600577459.

Karsten, Lia. 'It All Used to Be Better? Different Generations on Continuity and Change in Urban Children's Daily Use of Space'. *Children's Geographies* 3, no. 3 (December 2005): 275–90. https://doi.org/10.1080/14733280500352912.

Kyttä, Marketta, Jukka Hirvonen, Julie Rudner, Iiris Pirjola, and Tiina Laatikainen. 'The Last Free-Range Children? Children's Independent Mobility in Finland in the 1990s and 2010s'. *Journal of Transport Geography* 47 (July 2015): 1–12.

Littke, Hélène. 'Planning the Green Walkable City: Conceptualizing Values and Conflicts for Urban Green Space Strategies in Stockholm'. *Sustainability* 7, no. 8 (August 2015): 11306–20. https://doi.org/10.3390/su70811306.

Lorimer, Hayden. 'Walking: New Forms and Spaces for Studies of Pedestrianism'. In *Geographies of Mobilities – Practices, Spaces, Subjects*, edited by Tim Cresswell and Peter Merriman, 19–33. Farnham: Ashgate, 2011.

Mathisen, Tina. *Between Being and Longing: Young Former Refugees' Experiences of Place Attachment and Multiple Belongings*. Doctoral dissertation, Department of Social and Economic Geography, Uppsala University, 2020. http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-401838.

Nansen, Bjorn, Lisa Gibbs, Colin MacDougall, Frank Vetere, Nicola Ross, and John McKendrick. 'Children's Independent Mobility: Compositions, Collaboration and Compromises'. *Children's Geographies* 13, no. 4 (November 2014): 467–81. https://doi.org/10.1080/14733285.2014.887813.

Nayak, Anoop. 'Through Children's Eyes: Childhood, Place and the Fear of Crime'. *Geoforum* 34, no. 3 (August 2003): 303–15.

Nieuwenhuys, Olga. 'Can the Teddybear Speak?' *Childhood* 18, no. 4 (November 2011): 411–18. https://doi.org/10.1177/0907568211424817.

Porter, Libby, Ceridwen Spark, and Lisa de Kleyn. 'Navigating the Neighbourhood: Gender, Place and Agency in Children's Mobility'. *Children's Geographies* 19, no. 3 (2020). https://doi.org/10.1080/14733285.2020.1787950.

Punch, Samantha. 'Doing Research with Children. The Same or Different from Doing Research with Adults'. *Childhood* 9, no. 3 (August 2002): 321–41. https://doi.org/10.1177/0907568202009003005.

Ratnam, Charisma and Danielle Drozdzewski. 'Detour, Memories and Mobilities in and around the Home'. *Mobilities* 15, no. 6 (June 2020): 757–75. https://doi.org/10.1080/17450101.2020.1780071.

Rautio, Pauliina. 'Children Who Carry Stones in Their Pockets: On Autotelic Material Practices in Everyday Life'. *Children's Geographies* 11, no. 4 (November 2013): 394–408. https://doi.org/10.1080/14733285.2013.812278.

Ross, Nicola J. '"My Journey to School…": Foregrounding the Meaning of School Journeys and Children's Engagements and Interactions in Their Everyday Localities'. *Children's Geographies* 5, no. 4 (December 2007): 373–91. https://doi.org/10.1080/14733280701631833.

Schnugg, Claudia. 'Setting the Stage for Something New. Understanding Arts-Based Initiatives through the Lens of Liminality and Rites of Passage'. *Zeitschrift für Kulturmanagement*, 2 (December 2018): 77–102. https://doi.org/10.14361/zkmm-2018-0204.

Shortt, Harriet. 'Liminality, Space and the Importance of "Transitory Dwelling Places" at Work'. *Human Relations*, 68, no. 4 (April 2015): 633–58. https://doi.org/10.1177/0018726714536938.

Sjöholm, Jenny. *The Geographies of Knowledge in (Making) Artwork: The Field, the Art Studio and the Art Scene*. Doctoral dissertation, Department of Social and Economic Geography, 2010. http://urn.kb.se/resolve?urn=urn:nbn:se:uu:diva-132086.

Solnit, Rebecka. *Wanderlust– A History of Walking*. London: Penguin, 2000.

Tucker, Faith, and Hugh Matthews. 'They Don't Like Girls Hanging around There'. *Conflicts over Recreational Space in Rural Northamptonshire* 33, no. 2 (January 2001): 161–68.

Valentine, Gill. *Public Space and the Culture of Childhood*. Aldershot: Ashgate, 2004.

Wales, Mark, Fredrika Mårtensson, and Märit Jansson. '"You Can Be Outside a Lot": Independent Mobility and Agency among Children in a Suburban Community in Sweden'. *Children's Geographies* 19, no. 2 (June 2021): 184–96. https://doi.org/10.1080/14733285.2020.1773401.

Wylie, John. 'A Single Day's Walking. Narrating Self and Landscape on the South West Coast Path'. *Transactions of the Institute of British Geographers* 30, no. 2 (June 2005): 234–47.

Chapter 3

DANGERS IN THE THIRD PLACE: WALKING, PUBLIC TRANSPORT AND THE EXPERIENCES OF YOUNG GIRLS IN CAPE TOWN AND ABUJA

Claire Elisabeth Dungey,[1] Hadiza Ahmad,[2]
Joseph Mshelia Yahaya,[3] Fatima Adamu,[4]
Plangsat Bitrus Dayil,[3] Ariane De Lannoy[5] and
Gina Porter[1]

[1]Durham University, Department of Anthropology

[2]University of Abuja, Department of Geography and Environmental Management, Faculty of Social Science

[3]University of Jos, Department of Political Science

[4]Usmanu Danfodiyo University, Department of Sociology

[5]University of Cape Town, Southern Africa Labour and Development Research Unit (SALDRU)

Introduction

This chapter explores how girls between the ages of 10 and 17 in Cape Town and Abuja conceptualise dangers during their daily experiences of travelling, particularly when walking or taking public transport to school or an after-school club. Within particular areas of these cities, girls fear various dangers when travelling to school, such as rape, gun violence, traffic accidents, human trafficking or theft, and sometimes are exposed to severe insecurities on those journeys.

This data shed light on how young girls in Cape Town and Abuja talk about dangers. Still, it is essential to bear in mind that their experiences in these locations are unique and not representative of people living in other parts of the respective cities. Older women in Abuja and Cape Town emphasised the unreliability and cost of transport in their area as a key concern and

mentioned harassment or dangers less frequently but emphasised that they still needed to travel despite these difficulties (Porter et al. 2021).

The children in Cape Town came from within and close by our two focus study sites (one inside and one outside the city boundary). Some of the children who participated in the focus group discussions – but not all – were from an area with a long history of gang violence – which is not necessarily typical of other townships around the city. In Abuja, our respondents, who were all girls, came from a satellite town outside the city boundary and another low-income neighbourhood located within the city boundary. In both sites, there are limited transport options, violence and traffic insecurities that were not commonplace all over the city. Just like many others, the respondents frequently travelled into the city centres, or travelled to school in their neighbourhoods.

In this chapter, Oldenburg's theory of the third place is discussed in relation to studies of transport and security in the research's city contexts, bearing in mind that his theory is developed in a very different setting. In his famous essay 'The Third Place', Oldenburg (1999) details how people in the United States enjoy so-called third places that allow them to meet informally – for instance, supermarkets, pubs or a street corner. A 'third place' is different from 'home' or 'work/school', as there are fewer obligations, and a third place makes you feel more part of a community than formal organisations. Oldenburg (1999) did not give much attention to public transport as a 'third place'. He argued that the lifestyle of the home-to-work-and-back-again shuttle had led to a less lively urban environment which previously had enabled informal socialisation in third places (O'Hare 2019).

Other scholars, however, have focused on the potential for a third place to be a place of transit (O'Hare 2019; Woolcock 2019), especially in more recent times. Since much time is spent on the way to, and on, public transport, the commuting space has the potential to be a third place, whether this is a shared vehicle or a private car. People meet at bus stops, railway stations or in trains or trams, or communicate with others online while travelling (O'Hare 2019). In this chapter, attention is given to what a third place looks like when children in Abuja and Cape Town fear various obstacles on their way, such as traffic accidents, being raped, being harassed by young men or even being kidnapped on their way to school? However, it has to be noted that the formal timetable structure at school influences when and how children decide to travel and that travelling to school is not simply a matter of carefree socialisation or choice.

In the chapter, it is argued that the school and other journeys that young people in these study sites undertake are characterised by perceived dangers while documenting how girls develop tactics to navigate these dangers. Most of respondents were girls since the aim was to understand female perspectives on travelling and their aspirations to work in the transport sector. In Abuja, focus groups were organised by in-country teams who managed to

recruit girls in two research sites. In Cape Town, focus groups were organised more informally in after-school clubs in two research sites with groups of girls. Here one group of three boys who wanted to take part was included, whereas another group expressed interest at first but did not show up for the agreed time. We chose to separate focus groups by gender to allow the children to express themselves freely but without excluding boys from participating. Previous studies have explored school journeys as significant for acquiring skills such as independence, travel companionability or confidence (Goodman et al. 2014; Romero 2010), yet few studies have focused on how children and young people learn to navigate different dangers on their route to school. Some studies have focused on how children develop social relationships (adults or other children) on their travels, which can provide their safety, for example, Ross' (2007) study of school journeys in Scotland, or Behrens and Muchaka's (2011) study of children walking to school with adult supervision (a walking bus) in both low-income and high-income parts of Cape Town (Rondebosch and Delft). Moreover, Eagle and Kwele (2019) paid attention to university students and how they were exposed to violence on route in Johannesburg, South Africa. Another study in Lesotho focused specifically on children's experiences and how they attach complex emotions to school journeys, including both fear and admiration (Morojele and Muthukrishna 2013).

A comparative study of young people's mobility practices conducted across urban and rural locations in the Eastern Cape in South Africa, Malawi and Ghana demonstrated how commonly girls fear harassment and rape in very diverse contexts (Hampshire et al. 2011; Porter et al. 2010a, b, c, 2017, chapter 3). Girls in Eastern Cape were often said to be inviting trouble if they dressed inappropriately on public transport: some of those who fell pregnant were expected to shoulder this burden and had to readjust their future career trajectories accordingly (Hampshire et al. 2011; Porter et al. 2010c). Across sub-Saharan Africa, such attitudes are supported by a widespread patriarchal discourse that implies that women and girls' vulnerability is also compromised by their sexual appetite (Porter 2011). When understanding these dangers that are also felt by girls in Cape Town and Abuja within our study locations, it is important to briefly outline the historical context. In the following sections, some background information is given on the three contexts as well as the research methods that were used to investigate children's journeys. This is followed by two overall themes with various subsections that shed light on these: (i) dangers on public transport and (ii) dangers when walking. After this, how Oldenburg's theory (1999), if applied in an African context, needs to take into account the various dangers that young people navigate on route and the strategies they employ to overcome them is discussed. In the concluding section, it is shown that third places

can be seen as travel spaces, but there is a need to include perceived dangers as well as gendered experiences of third places.

Background

Cape Town is a highly unequal city; UN Habitat[1] classifies about 40% of households as poor, with insufficient income for necessities (Newman and De Lannoy 2014). The apartheid era has systematically shaped access to socio-economic opportunities and residential locations. The historical impact of forcefully removing those classified as black and coloured from the inner city to townships to the periphery has left traces of poverty, economic inequalities and lack of access to adequate services (Salo 2018; Makanga et al. 2015). The history of apartheid in South Africa has also left a legacy of high levels of violence (Parkes 2007), and growing up and living in areas with lower socio-economic status place people at higher risk of being exposed to crime (Makanga et al. 2015).

In addition, current transport geographies in Cape Town have been shaped by the spatial infrastructure of apartheid with poor black and coloured people continuing to live in peripheral zones which require a more difficult, costly, unreliable and uncomfortable commute. However, paratransit transportation has offered flexible transport in townships whereby passengers have been dropped off or picked up along the route. *Amaphela* taxis, a form of paratransit transportation, emerged in the 1970s and 1980s. They are sometimes labelled in an overly negative light by both commuters and the press, for instance, for criminality. Rink (2020) shows that drivers may also flexibly adjust to their customers, that they provide affordable transportation in townships and that many care for their customers – for instance, by avoiding areas where their passengers are more likely to be the subject of criminal acts, or by caring for passengers with special needs.

In several townships around Cape Town, approximately 60% of young people live in income poverty, and between 20% and 40% of young people live in informal dwellings (Youth Explorer 2021). Some of the townships were established in the late 1960s, and many of the areas remain imbued with a strong sense of isolation and disconnection from the economic vibrancy of the city centre. These factors influence children's mobilities but are not the only ones that determine children's sense of space and place. In a study of children's mobilities in the Cape Peninsula, Benwell (2009) reminds us that children's experiences are diverse and experienced differently depending on the setting. Multiple factors shape children's mobilities, for instance, the physical environmental, notions of remoteness, age, gender or the presence of animals that children might be scared of moving nearby.

1 United Nations human settlement programme.

In Nigeria, several scholars have written about the link between security, rapid urbanisation and informal public transportation (Uhegbu and Tight 2021; Ajala and Kilaso 2019; Ipingbemi and Aiworo 2013; Oviedo et al. 2017). ActionAid (2016) has focused on women fearing harassment or rape while using public transport. However, no studies have focused on school journeys in Abuja in particular, except Ndukwe and Akintobi (2020), who studied environmental variables affecting children's educational performance in Abuja such as the home to school distance but mainly with a statistical focus. In other parts of Nigeria, Ajala and Kilaso (2019) have studied safety and vulnerability issues of students in Ogun state, and Ipingbemi and Aiworo (2013) focused on students and their perceptions of transportation challenges in Benin city, particularly concerning poor driving.

After Nigerian independence in 1960 and the oil boom period, it was decided that it was unsustainable to keep Lagos as the capital city. Abuja was created in 1973 with a vision of an orderly, modern and new capital city. The masterplan required a relocation of informal settlements in the city, which meant that 800,000 were forcefully evicted between 2003 and 2007 (Oviedo and Sabogal 2020; Oviedo et al. 2017). Development in Abuja has primarily focused on the city centre and many living in informal settlements lack good roads, electricity and pipe-borne water. Although rent is cheaper in satellite towns, many residents lack basic services such as food, housing and health security (Nicholas and Patrick 2015). In a survey conducted in an informal settlement in Abuja, Ovideo and Sabogal (2020) found that income levels were 12% above the legal minimum wages. Another paper on transport security in Nigeria points out that criminality is a major concern on public transport – and passengers are sometimes kidnapped during trips. The Abuja-Kaduna highway and Abuja-Lokoja-Okene areas are particularly hard hit, although documentation of these cases is scarce, beyond media reports (Onatere-Ubrurhe 2016).

In recent years, motorcycle-taxis (*okadas*) have formed an important mode of travel across the city for all age groups; however, they are now banned from the city centre, due to the city authorities' concern with crashes, as well as unrest, theft and other antisocial behaviour (Porter et al. 2020). This is important when understanding the data presented here as the *okada* ban led to children using different forms of transport on school journeys.

Methodology

This paper is based on a collaborate research project about mobility practices and transport barriers for young women in Cape Town and Abuja, drawing on data collected between September 2019 and February 2020. The wider study explored how women and girls experience travelling and working in the transport sector. The perspectives of men employed in the transport

sector were not excluded, but the main emphasis was on women's mobility practices and their aspirations to work within the transport sector.

One part of this project explored how school children experience various challenges on their way to school and asked them about their career aspirations, with particular reference to their views about working in the transport sector. This involved obtaining ethical clearance to conduct a study in a school context, seeking permission from the institutions that were taking care of the children, and asking children to sign consent forms or to provide verbal consent. Most of the focus group interviews were conducted in their first language, isiXhosa, in South Africa and occasionally in English/Afrikaans, whereas the children in Nigeria mostly communicated freely in English. In Abuja, two focus groups were conducted in one research site, and three in another, each with four or five girls. These interviews were in four different secondary schools. Some groups comprised girls in junior secondary school, whereas girls in other groups were slightly older, senior secondary school students. Their ages varied although they were in the same class. Some were between 12 and 17 in junior secondary school but mostly between 13 and 14 years, whereas girls in senior secondary school were between 14 and 17, and mostly between 15 and 16 years.

In Cape Town, data are based on five focus group discussions in three different after-school clubs. In one location, two focus groups were conducted; one with seven girls between 9 and 10 years of age, and one with three boys between 11 and 15. In the second location, two focus group interviews were carried out with girls. In the first group, they were between 14 and 15 years of age, and in the other group, they were between 15 and 18. Finally, an interview was also conducted in a third location, an after-school club, with girls between 14 and 16 years of age. The researchers were introduced on the first day, and both boys and girls could sign up for focus group interviews by putting their names on a piece of paper if they were interested. If they did not show up the following day at the agreed location, no further inquiry was made, as their participation had to be voluntary. Some time was spent interacting or playing with the children before starting the interviews in each country.

Studies have shown that walking with children can be a useful way of gaining insights into their lived experiences, for instance, children's experiences of dangers or hazards on the way, whether real or imagined (Porter et al. 2010b). When undertaking fieldwork for this project, however, there were various challenges that hindered walking with children to school. First, the security challenges in the study sites in both Cape Town and Abuja made it difficult to conduct participant observation with children in all the areas where they walked, for instance, due to frequent taxi violence and clashes, but also to kidnappings (with the latter a particular concern among staff working in Abuja). Consequently, the researchers' Universities and ethics committees

required them to conduct research within the barriers of school settings, and not using public transport on the way to meetings. When COVID-19 hit both South Africa and Nigeria, face-to-face fieldwork was suspended and the researchers could no longer conduct participant observation. This also meant that any face-to-face follow-up studies of schools or after-school clubs were impossible when lockdown was imposed in March 2020. In the larger project, peer researchers (18–35 years of age) had recruited and trained to conduct interviews in their communities and write travel diaries. These peer researchers continued to write about their experiences when making essential journeys, such as for food and medicine (Porter et al. 2021). The lockdown diaries informed the wider understandings of dangers that young people experienced, but are not the key material drawn from for this paper.

Dangers on Public Transport: Abuja and Cape Town

This section is divided into four subthemes – kidnap, sexual violence, gun violence and traffic dangers – that each explores dangers on public transport in Abuja and Cape Town in different ways. Data show that girls in Abuja spoke about traffic accidents more frequently than girls in Cape Town but also talked about kidnapping (so-called one chance), whereas girls in Cape Town talked about sexual violence – including rape – and guns. The theme that kept occurring in both research sites was the fear of kidnap.

Kidnap: 'one chance' and stolen children

In Abuja, girls mentioned kidnap as something they feared: they were warned by their parents not to approach cars with dark (tinted car) windows. They referred to these cars as 'one chance taxis', meaning that kidnappers would randomly kidnap people, ask for money and threaten family members on the phone. Girls explained that they always travelled in groups on roads with traffic, as they felt more exposed if they passed quiet areas where people might be taking drugs, smoking cigarettes or brewing beer, not because they had experienced kidnap or street crime, but because of their fear of this.

One of the girls, in a focus group conducted in Abuja, spoke about how she and a group of friends had been warned not to enter a particular car:

> My own [experience] was second term. I was going home me and my friend xx [name] we used to go together in groups sometimes if they are coming for us we go alone [24: 56]. So we used to stop by our house to drink water. Because trekking was very very stressful. Trekking to [city location].

> So we used to stop to our house to drink water so that day we almost entered this taxi. What do they call it. This one chance taxi. We wanted to enter the taxi. Those people those agberos [money collectors] used to enter there. We were like about to enter. They just came from nowhere and jammed door. What up, we just want to enter the car. That car is bad car you should not enter it. We were like, Ah, thank you. God thank you. And the glass was like dark. This kind of dark. God, thank you. So, that is all. (Female respondent, 15 years old, year 3 senior secondary school, research site within city periphery).

The students had been lucky to be warned about the 'one chance' taxi. None of the girls spoke about their experiences of being captured by kidnappers ('one chance' taxi drivers), but rather how it had been a near miss and how they had thanked God. When clarifying what would happen if they were captured by a 'one chance' taxi, the girls explained that they would take them to a strange place and perform rituals, such as cutting up their body parts. The issue of 'one chance' was a common theme in interviews with all age groups in the wider research study in Abuja: both men and women talked about kidnap as a major problem. In both study sites, women spoke about how 'one chance' taxi drivers would sometimes hold women at gunpoint in front of an ATM, and they would be forced to withdraw all their money.

The issue of kidnapping also occurred in the data from Cape Town, in both research sites. As one student described: 'There are robberies and, even in the taxi, we are risking because there are kidnappings; human trafficking occurs' (Female respondent, 18 years old, grade 10, urban periphery site). The girls in her focus group explained that consequently they were afraid to take public transport and did not like walking to school. They were particularly afraid to walk early in the morning when it was dark – and they would be more at risk of kidnap in these situations – but at the same time, they were also afraid of leaving late in the morning, in case they did not make it to school on time (and would then be refused entry): 'In the morning, they close the gate if we are late and then we would need to leave the house very early, which would be dark and that could lead to us meeting criminals on the way and falling victims. So our parents also don't like it; they prefer that we take a taxi rather than walking' (Female respondent, 18 years old, grade 10, urban periphery research site).

In the rural city-connected study site in Cape Town, as noted earlier, interviews were conducted with both boys and girls. Both the girls and the boys in separate focus groups spoke about a particular street in their informal settlement that they found dangerous since children had been kidnapped here. While explaining this, the girls, who were about 10–12 years, gestured that they could have their throats cut. One of the boys said that he had seen, with his own eyes, a child had been taken away by kidnappers.

Sexual violence: saying no to taxi drivers

In a low-income township in Cape Town near our urban periphery research site, the researchers interviewed groups of girls about their experiences of travelling to their after-school club which was located in the project urban periphery site. All of the girls mentioned in the interview below lived in an area that had previously been classified as a coloured community with a long history of gang violence – an issue that is not as widespread in other townships in the area. In the discussion with these girls, the topic of violence was more prominent than among the respondents who lived in the urban periphery site. The overarching theme they spoke about was sexual violence as well as gang violence that they could be exposed to when travelling – a theme that the girls in Abuja did not speak about.

The girls spoke negatively about their home area, located within walking distance of the school, and said that they wanted to leave this area both due to violence and also because they aspired to educate themselves. In a group discussion, girls discussed the dangers of getting pregnant and how their grandmothers had warned them about using public transport.

> […] my granny didn't want us to use public transport because of what happened to my sister [14 to 15 years old]. Ja, so she was still in school and the driver was grown already. And then […] she fell pregnant […] and then ja they are just trying to make a living also and my granny didn't want me to use public transport because they make you late and they don't care so ja […]. They give you free lifts and that but they know why they are doing it. (Female respondent, 14 years old, grade 9, research site within city periphery)

The group of girls (around 14–16 years of age) explained that taxi drivers could give them a lift for free, but they always wanted something in return, and getting involved with a taxi driver could mean getting pregnant. One of the respondents said: 'And then the women and the children get a bad name; they are called taxi queens' (Female respondent, 14 years old, grade 10, research site within city periphery).

In the interview, the girls were projecting an image of the 'good school child' who stays away from taxi drivers and listens to their grandmother's advice; they were aware of the dangers of accepting 'free lifts' and being negatively stereotyped as taxi queens. The issue of getting involved with taxi drivers is complex (see Leclerc-Madlala 2003; Porter et al. 2017, 214–15); more data would undoubtedly shed further light on this. The girls in this study were negotiating teenage identities by focusing on education as a pathway out of deprivation. Still, there might also be other girls, out of this study, who would approach taxi drivers who could function as sugar daddies to provide status

and (some) financial security. Other studies have focused on the experiences of young women engaging with older, richer men and the need to understand the context that facilitates such relationships, but also how schooling influences adolescent pregnancies (Shefer et al. 2011; Toska et al. 2015; Mampane 2018).

In another focus group interview at another school located in the research site within the city boundary, some girls had experienced physical touching when sitting in front of the taxi, and men often asking for their WhatsApp number. One of the girls explained that she had got out of the taxi after such an experience and taken note of the registration number, but the driver had been angry at her. The possibility of sexual violence was a key component of how many of these girls thought about travelling and perhaps they were keen to emphasise this to the international researchers in the project.

Gun violence

Even though some of the girls we interviewed in Abuja spoke about the risk of being held at gunpoint when they entered a 'one chance' taxi, they did not talk about gang wars in a similar way to the girls and boys in Cape Town. In one of the communities in Cape Town, gun violence was mentioned as a danger that girls feel they are exposed to when travelling to and from school. As one of the girls from an after-school club in Cape Town said: '…we live here and there is gang and there, there is another gang again and they shoot off each other. (Interviewer: Oh my God!) We are in the middle and they have to run through us to get to somebody so the guns and all of that. There are so many people, so many people that get shot because of them. Or you would be sitting in your house and a bullet comes through your window' (Female respondent, 14 years old, grade 9, urban periphery research site). Another girl said: 'And if they can't get to you, they take your family' (Female respondent, 14 years old, grade 10, urban periphery research site). Another girl expressed: 'Sometimes you are scared to go to school because you have to go on the highway and they [gangs with guns] operate there. Sometimes you have to miss school because of that' (Female respondent, 14 years old, grade 9, urban periphery research site).

In the example above, the girls who participated in the focus group spoke about their fear of travelling through a dangerous area when travelling to school. Some girls perceived their home area as relatively safe, whereas others mentioned that gangs would be shooting each other just outside their houses. The girls needed to leave early to make it home safely after the interview, whether by taxi or walking. The participants in this project did not speak about feeling unsafe within the walls of the school compound but rather just outside the school gate. Young girls growing up in areas where gang violence is rife,

and known to erupt easily, were worried about gun violence and becoming victims on their journeys to school, especially during periods when disputes within the taxi industry became more heated.

Few girls aspired to work in the taxi industry. They were keen to learn how to drive private cars and be taxi owners, but without having to drive public transport vehicles. In this way, they suggested they could be earning money when sitting at home. When asked what they thought about jobs in the taxi industry, a boy responded that the drivers' families could be targeted. Although this might not be the owner of the vehicle, having a taxi could be associated with certain risks: 'I don't like taxis, they shoot at each other and sometimes taxi owners. If the driver brings money and not enough, then they shoot the driver and sometimes they also target the rest of the family' (Male respondent, grade 6, 12 years old, rural city-connected site).

Accidents, cars not stopping, being forgotten

While respondents in Cape Town spoke about gun violence, rape and human trafficking, the girls in Abuja talked about their everyday experiences differently, including concerning car and motorbike crashes. Traffic accidents were overwhelmingly not spoken about by our respondents in schools in Cape Town – perhaps because they wanted us to know about the issues they were most scared of, and which could directly harm their families.

In Abuja, several of our respondents talked about traffic accidents they had observed or experienced when travelling from different states of Nigeria to the capital city. These accidents could sometimes cause delays and distress, and children talked about these experiences at length, detailing how an *okada* (motorbike-taxi), for instance, would knock a girl over when travelling, or how they had been in traffic accidents with their parents, which had been a shocking experience for them. Some reported how they had been scared on their own on public transport if their mobile phone was not charged, if they were sitting next to strangers or the driver had forgotten their destination after being given instructions.

When asked if they could share an experience about their school journeys, a girl in the focus group mentioned that she felt particularly scared of taking a 'bike' (*okada*) if her area was full of people. Motorbike-taxis (*okada*) were banned from much of the city during the research, but the ban has since been lifted. It remains in place on the main city highway. Even though the okada were banned in the urban periphery site during the field research, they were still sometimes operating for school transport.

However, perhaps due to the ban, the girls in the two sites spoke about different forms of transport in their everyday experiences:

> Mine is that I don't like picking bike on market day. Like today, yes, if I am coming to school I will not like to enter bike, I will prefer to enter car, because if you are on bike the bike will just, the way they will be running, the place will jam packed so accidents can likely happen, so I don't like picking bike on market day. But any other day is comfortable (Female respondent, 17 years old, SS3, rural city-connected site).

A female respondent in the urban periphery research site said that she found it particularly dangerous when she had to jump onto a bus that was already moving, since they did not wait for passengers but kept moving. On the other hand, getting a private taxi was easier in terms of not overloading: 'Just like going is very easy because you get a car [taxi] easily. And people will not be filled up coming back with load. That is the most troubling experience. You will see them moving they will not even wait for you. You have to run off to the bus and climb. Luckily you don't get injured' (Female respondent, 15 years old, SS3, urban periphery research site).

While girls experienced challenges when getting on and off public transport, they reported many more dangers they encountered when walking on foot, both in Cape Town and in Abuja. Walking was probably their most common means of travel due to the shortage of money for fares. This is explored in the following section, focusing on how girls avoid certain areas or people, but also the strategies they use when walking or taking public transport as well as their constraints.

Dangers when Walking to School

In Porter et al.'s (2010b) study based on research undertaken in Ghana, Malawi and South Africa (in both urban and rural areas), children reported that they were afraid of threatening dogs, abusive calls, threatening farmers, potential rapists, witches, snakes and wild animals – some of these experiences were based on actual experiences, whereas other scenarios were imagined. While some of the respondents in Abuja did talk about barking dogs that they tried to avoid, the theme that occupied them most was passing street corners that seemed dangerous – for example, people smoking, consuming alcohol or approaching 'mad men'. In the rural city-connected research site, one girl explained: 'There, the road to my school, there are two places you can follow. Either you go through. There is a nightclub, and there is traffic way area. So the nightclub area is very quiet. I don't usually feel comfortable like trekking through that area because it is really risky and dangerous for me.

So I prefer following the busy area, which is a traffic way' (Female, 16 years old, Senior secondary school year 2, rural city-connected site).

The busy areas were clearly preferred by girls, so they could avoid narrow pathways or places they felt uncomfortable walking through. Another girl described how she needed to avoid certain areas where people were smoking cigarettes or brewing *Burukutu* (a traditional homebrew alcoholic beverage from guinea corn and millet). She said:

> I normally avoid one area near my place because it is new site, it's like you can follow that site round the school complex. I followed it once it was a living hell for me. I turned, like there is a back road, I used to pass out in my area, we called the place new site. That place is so dirty – you see, that is where they sell drinks, all these things. It is not good at all. You see Hausa people just smoking cigarette everywhere. You hear cigarette. Some people you see Burukutu too, cooking it in one big pot. (Female respondent, 12 years old, Junior secondary school year 3, urban periphery research site).

These experiences closely mirror conditions and tactics reported by young girls on their way to and from school in urban sites in Malawi and South Africa (Porter et al. 2010, 2017) One female respondent mentioned that she feared crossing a bridge due to drug users, and sometimes they would misbehave if there was a girl. However, at the same time, she emphasised that walking with your friends was 'less boring' and walking could offer companionship:

> And you are following that route and it's lonely so you won't get to see your friends or someone to walk to school with, you would just be walking alone. It is kind of boring. When you follow the more exposed road there. You will get to see your friends like hi how's it going? You'll be talking. You won't feel as bored, you won't even know when you've reached school rather than following the other road you'll be feeling tired […]. (Female respondent 15, Senior secondary school year 3, urban periphery site)

This quote is significant, since it shows that even though girls experience dangers on the way, they also find it enjoyable to travel with their school friends, both as a way of relieving boredom, but also, importantly, as a way of protecting themselves from dangers in areas that they did not feel comfortable in when walking alone. Girls often warned each other of dangers. As one student described:

> […] there is bushes so where narrow path. I heard from a student in JS3 (Junior secondary school, year 3) that there is a mad man standing there you find, he speaks like xx [unclear] middle of the night so when I go there, I was hearing

> voice, so I walked very fast I was scared. I had to move my leg when I hear noise in the bush there, so I run very far. (Female, aged 14, senior secondary school year 2, rural city-connected site).

The girls described that the 'mad man' was naked, and he would take girls into the bush, and the respondent had heard about this from her sister. Although this was not a story of sexual violence that had happened to her, the danger of sexual violence did exist, and girls had to look out for men, who might approach them. By warning each other and walking together, they felt safer in navigating these dangers. Walking in groups is the most common response to anticipated dangers of travel on foot, and is often strongly encouraged by parents too (Porter et al. 2011, 2017).

In Cape Town, girls also felt unsafe walking, which sometimes caused them to use public transport, but at other times they were afraid of taking mini-bus taxis due to girls being raped. As one girl said: 'But I have stopped taking taxis because children get raped, so it is better to be late, I have reason why I am late' (Female respondent, 16 years old, grade 10, urban periphery research site). She aspired to be a policewoman with a licensed gun to protect her community and avoid such cases. The girls in her focus group described that they were several girls living in the same street, and they would walk together.

The following subsection describes how young people in both Abuja and Cape Town try to employ various strategies to overcome dangers, and how they feel less mobile in Abuja due to their gender.

Strategies and constraints

When discussing with children how they navigated dangers on the way to school, they had various suggestions as to how to keep themselves relatively safe. In Cape Town, a group of girls thought it was safer to walk with boys:

> Resp 3 Some boys care and they will fight for us, but some don't. Sometimes we even use our phones while walking with the boys because we feel safe. (Female, 16, grade 10, urban periphery site)
>
> Resp 2 And boys have connections. (Female 18, grade 10, urban periphery site)
>
> Resp 3 Well, when you are someone that likes your phone, you get creative with hiding it in other places, like in your private parts. (Female, 16, grade 10, urban periphery site)
>
> Resp 4 Also you mustn't show that you are scared, you must just walk comfortably. Sometimes we know the people that rob us and when you get to school you report them and they will look for the criminal. (Female, 16, grade 10, urban periphery site)

In our urban periphery site, girls suggested that one way to manage risks, such as phone theft, was to walk with boys who sometimes helped them. The boys could have connections to people in the area, who might be stealing phones. However, as the girls explained, it was still important to hide valuables such as phones, in order not to put themselves more at risk. Other ways that girls tried to protect themselves was by, for instance, registering the number plate of a mini-bus taxi. However, some girls did not agree that was a good idea, since taxi drivers would change number plates, so this would be useless. The girls in the focus groups discussed various methods that might keep them safer – such as taking scissors with them on a taxi, or jumping off a taxi in cases of danger. Even though these tactics were unlikely to be used by respondents if they were exposed to actual dangers, they still imagined them as useful. While entering a taxi already occupied by other women passengers was sometimes considered safer, it was mentioned that this could also be dangerous as the women might collaborate with the criminals. As one student said, entering a taxi with just the driver was better and jumping out. Other strategies included walking in groups, especially during darkness or load-shedding[2] (electricity cuts), or taking a U-turn if they saw a group of men.

In Nigeria, girls emphasised that it was very important to follow the traffic rules and regulations when travelling, and keep your doors locked when being driven, so nobody could enter the vehicle, especially at traffic lights. As mentioned previously, the girls enjoyed travelling with other people and were warning each other of dangers such as men whom they perceived to be 'mad'. However, the girls in Nigeria also spoke of various restrictions they experienced as girls and how they could not travel as freely and extensively as their male siblings. They were told to be cautious and protect themselves, sometimes staying home. As one girl in the urban periphery research site in Abuja said:

> […] My brother is free. Go anywhere to do anything like but me they [her parents] say no. There is child abuse any man or boy can just do any bad so I was, but now even time I was still like 10 years old. So but now. They used to teach us in school. They say everything. So I have now understand everything they are saying now. My brother can do whatever he wants because he is a boy. And sometimes I wish I am a boy. (Female respondent, 12 years old, JS3, urban periphery site).

2 Load-shedding in South Africa refers to the state-owned energy utility (Eskom) that began taking parts of the national grid offline for certain periods of time (du Venage 2020).

Even though children gathered in groups on the highway, instead of passing narrow pathways or places where people would smoke or drink beer, they still did not feel that they could move as freely as their male counterparts.

Discussion: Dangers and the Third Place

Images of unruly and potentially destructive youth, always in a state of becoming but never arriving, alongside statistics of HIV or crime rates, continue to shape how Africa's urban youth are represented (Honwana 2012). Western media regularly pictures Africa's urban youthhood encompassing issues such as child prostitution, teenage pregnancy and youth vigilantism (Porter et al. 2010a). Punch (2003) reminds that studies have often focused on one aspect of children's lives, such as their work, which can lead to an inflexible understanding of their lives. This chapter does not aim to contribute to an oversimplification of girls' experiences in Cape Town and Abuja (e.g. gun violence, rape, traffic accidents or similar). Instead, in the ethnography presented above, the ways in which young women's experiences of dangers are linked to specific locations and shaped by their circumstances have been explored. Moreover, school journeys are also about comradeship and shared experiences with peers; children reported feeling safer with their peers.

Fullagar, O'Brian and Lloyd (2018) emphasise that understandings of 'third places' have often assumed that they are inherently good spaces for contemporary urban life. However, their study shows that third places are often gendered spaces where women negotiate gender constraints in their lives, for instance, harassment. They engage critically with Oldenburg's theory, particularly the assumption that a third place is an inclusive place by nature since it might not be accessible to all and on equal terms. As emphasised by Fullagar, O'Brian and Lloyd, leisure activities are not simply a matter of free choice, as they are often open to some groups and not others. Women might be constrained to access some spaces due to family commitment or work, but also fear safety, violence and harassment. It is important to recognise, at the same time, that women appropriate spaces in ways that make sense to them and make meaningful social interactions.

However, what was demonstrated in this chapter is that third places in the transport arena, for example, footbridges, the time spent informally chatting inside taxis or the routes that girls chose, are often characterised by dangers and obstacles that girls need to navigate. Girls in Abuja meet on the larger roads near a major bridge to travel to school to ease some of their fears – and relieve boredom, as they explained. The third place as a travel place, is not a place to freely socialise. For instance, the children in Cape Town had to leave school or home at a particular time to fit with school schedules,

and were afraid of leaving their homes in the dark, on foot, to make it to school on time. Due to this, they had to choose between walking or taking public transport, each of which carried risks.

Thus, third places should not be romanticised as always characterised by carefree and relaxed sociabilities, but rather as places that encompass both joys and dangers, as well as control from others such as parents or teachers. Girls in Abuja, for instance, could not move as freely as their male siblings and had also learnt this at school – they needed to protect themselves from dangers. Woolcock (2019) argues that the 'liveability' of cities has often been ranked according to adults' understandings of place, rather than children's interpretations, but that there is an increasing attention towards informal places that might be similar to what Oldenburg called 'third places'. Rather than conceptualising children's activities as characterised by free play, this research demonstrates how children so often experience their settings as unsafe, and that these settings cause their awareness of the need to protect themselves from dangers.

Conclusion

Drawing on multiple examples of dangers or perceived dangers, this research demonstrated that children in the study locations in Abuja and Cape Town need to be constantly alert in their movements, whereabouts and conduct in their travel to school. This includes warning each other on the way of certain dangers such as 'mad men' or potential rapists or encouraging each other to avoid getting involved with taxi drivers and not accepting free lifts. School journeys, as well as other journeys that young people undertake, are characterised by dangers, but at the same time girls develop tactics to navigate these dangers, for instance, by walking with boys, by anticipating that they need to jump off taxis in cases of danger, taking note of registration numbers or walking in groups. The children who participated in this study and their conceptualisations of dangers are important to take into account to understand these settings and routeways. Their conceptualisations of dangers shape both the way in which they move around in the city and their educational aspirations.

Travelling in both Abuja and Cape Town for young people is particularly complex, as they might not know their way, might have to hide their phones to stay safe or are afraid of certain areas or people. At the same time, travel spaces also offer opportunities for spending time together informally, and girls explained that they would walk together in the morning or meet each other on the highway since it was much safer than going to smaller streets where they might meet people they did not trust. Girls in Cape Town

were particularly aware of gun violence as well as sexual harassment and the stigma of being labelled a taxi queen if they were to start a relationship with a taxi driver in exchange for free lifts. This theme was less prominent in Abuja where girls were more likely to talk about traffic accidents or injuries, as well as the danger of being a victim of kidnappers in one chance taxis. Walking to school is perceived as dangerous, and perhaps less of a 'third place' (Oldenburg 1999) in between home and school, at least if you conceptualise a third place as a place of carefree socialisation and relaxation. At the same time, children in this study spent a lot of time on public transport or walking with their peers, and had time to socialise. There was a sense in which the girls warned each other of dangers they could encounter, and enjoyed each other's company when walking together. If we think of travelling spaces as third spaces, there is a need to consider gender constraints and perceived dangers. In doing so, it can be acknowledged that third spaces can be radically different depending on different geographical and socio-economic contexts. Despite the risks associated with travelling to school, girls as active agents found a way of negotiating the dangers that they experienced on their school journeys and made decisions based on what they found the least dangerous option. 'Third places', such as bridges on the way to school where young people would socialise, were not always perceived as safe by girls – but they managed to negotiate this risk by travelling in groups.

Acknowledgements

The research is funded by the Global Challenges Research Fund through the Economic and Social Research Council (ESRC): Grant ES/S005099/1. Details of the larger project are available at https://transportandyouthemploymentinafrica.com/.

We would like to thank all the children who took part in this study as well as their teachers who made it happen. A special thanks to Nwabisa Guguluza and Umar Kabiru Yauri who helped facilitate focus groups in South Africa and Nigeria. We would also like to thank peer researchers and country consultancy group members with whom overall findings were discussed.

References

ActionAid, 2016. Freedom to move. Women's experience of urban public transport in Bangladesh, Brazil and Nigeria. 14 June 2021. https://actionaid.org/sites/default/files/178622_2786.pdf.

Ajala, Abdulrahman T. and M. O. Kilaso. 'Safety and Security Consideration of School Pupils in the Neighbourhood'. *FUTY Journal of the Environment* 13, no. 2 (December 2019): 38–48.

Behrens, Roger and Patrick Muchaka. 'Child Independent Mobility in South Africa: The Case of Cape Town and Its Hinterland'. *Global Studies of Childhood* 1, no. 3 (January 2011): 167–84.

Benwell, Matthew C. 'Challenging Minority World Privilege: Children's Outdoor Mobilities in Post-Apartheid South Africa'. *Mobilities* 4, no. 1 (February 2009): 77–101.

du Venage, Gavin. 'South Africa Comes to Standstill with Eskom's Load Shedding'. *Engineering and Mining Journal* 221, no. 1 (January 2020): 18–18.

Eagle, Gillian and Kgomotso Kwele. '"You Just Come to School, if You Made It, Its Grace": Young Black Women's Experiences of Violence in Utilizing Public "Minibus Taxi" Transport in Johannesburg, South Africa'. *Journal of Interpersonal Violence* 36, no. 15–16 (April 2019): 1–22.

Fullagar, Simone, Wendy O'Brian and Kathy Lloyd. 2019. 'Feminist perspectives on third places'. In *Rethinking Third Places: Informal Public Spaces and Community Building*, edited by Joanne Dolley and Bosnan Caryl, 1–17. Cheltenham, UK: Edward Elgar.

Goodman, Anna, Alasdair Jones, Helen Roberts, Rebecca Steinbach and Judith Green. '"We Can All Just Get on a Bus and Go": Rethinking Independent Mobility in the Context of the Universal Provision of Free Bus Travel to Young Londoners'. *Mobilities* 9, no. 2 (March 2014): 275–93.

Hampshire, Kate, Gina Porter, Mac Mashiri, Goodhope Maponya and Sipho Dube. 'Proposing Love on the Way to School: Mobility, Sexuality and Youth Transitions in South Africa'. *Culture, Health & Sexuality* 13, no. 2 (February 2011): 217–31.

Honwana, Alcinda M. 2012. *The Time of Youth: Work, Social Change, and Politics in Africa*. Sterling: Kumarian Press.

Ipingbemi, Olusiyi N. and Barry A. Aiworo. 'Journey to School, Safety and Security of School Children in Benin City, Nigeria'. *Transportation Research Part F: Traffic Psychology and Behaviour*, no. 19 (July 2013): 77–84.

Leclerc-Madlala, S. 'Transactional Sex and the Pursuit of Modernity'. *Social Dynamics* 29, no. 2 (2003): 213–33.

Makanga, Prestige Tatenda, Nadine Schuurman and Ellen Randall. 'Community Perceptions of Risk Factors for Interpersonal Violence in Townships in Cape Town, South Africa: A Focus Group Study'. *Global Public Health* 12, no. 10 (October 2015): 1254–68.

Morojele, Pholoho and Nithi Muthukrishna. '"My Journey to School": Photovoice Accounts of Rural Children's Everyday Experiences in Lesotho'. *Gender and Behaviour* 14, no. 3 (March 2013): 7938–61.

Ndukwe, Y. E. and Akintobi Olanrewaju. 'Effects of Environmental Variables on Academic Performance of Secondary School Students in Abuja Municipal Area Council, FCT, Nigeria'. *Direct Research Journal of Social Science and Educational Studies* 7, no. 1 (January 2020): 1–6.

Newman, Katherine S. and Ariane De Lannoy. *After Freedom: The Rise of the Post-Apartheid Generation in Democratic South Africa*. Boston: Beacon Press, 2014.

Nicholas, Ebehikhalu O. and Patrick D. Dawam. 'Impact of Poverty on Housing Condition in Gwagwalada Urban Area of Federal Capital Territory (FCT) of Abuja'. *International Journal of Social Sciences Studies* 3, no. 5 (September 2015): 33–39.

O'Hare, Daniel. 2019. 'Third Places in Transit: Public Transport as a Third Place of Mobility'. In *Rethinking Third Places: Informal Public Spaces and Community Building*, edited by Joanne Dolley and Caryl Bosman, 174–95. Cheltenham, UK: Edward Elgar Publishing limited.

Oldenburg, Ray. 1999. *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. Cambridge: Da Capo Press.

Onatere-Ubrurhe, Joyce O. 'Travel without Fear: A Proposed Strategic Action Plan for Monitoring Road Transport Security in Nigeria'. *Developing Country Studies* 7, no. 1 (2016): 124–30.

Oviedo, Daniel, Caren Levy and Julio D. Dávila. 2017. 'Constructing Wellbeing, Deconstructing Urban (Im) Mobilities in Abuja, Nigeria'. In *Urban Mobilities in the Global South*, edited by Tanu Priya Uteng and Karen Lucas, 95–110. London: Routledge.

Oviedo, Daniel and Orlando Sabogal. 'Unpacking the Connections between Transport and Well-being in Socially Disadvantaged Communities: Structural Equations Approach to Low-Income Neighbourhoods in Nigeria'. *Journal of Transport and Health* 19 (2020), (100966): 1–16.

Parkes, Jenny. 'Tensions and Troubles in Young People's Talk about Safety and Danger in a Violent Neighbourhood'. *Journal of Youth Studies* 10, no. 1 (February 2007): 117–37.

Porter, Gina. ' "I Think a Woman Who Travels a Lot Is Befriending Other Men and That's Why She Travels": Mobility Constraints and Their Implications for Rural Women and Girls in Sub-Saharan Africa'. *Gender, Place and Culture* 18, no. 1 (January 2011): 65–81.

Porter, Gina, Kate Hampshire, Albert Abane, Elsbeth Robson, Alister Munthali, Mac Mashiri and Augustine Tanle. 'Moving Young Lives: Mobility, Immobility and Inter-Generational Tensions in Urban Africa'. *Geoforum* 41, no. 5 (September 2010a): 796–804.

Porter, Gina, Kate Hampshire, Albert Abane, Alister Munthali, Elsbeth Robson, Mac Mashiri and Goodhope Maponya. 'Where Dogs, Ghosts and Lions Roam: Learning from Mobile Ethnographies on the Journey from School'. *Children's Geographies* 8, no. 2 (May 2010b): 91–105.

Porter, Gina, Kate Hampshire, Mac Mashiri, Sipho Dube and Goodhope Maponya. ' "Youthscapes" and Escapes in Rural Africa: Education, Mobility and Livelihood Trajectories for Young People in Eastern Cape, South Africa'. *Journal of International Development* 22, no. 8 (November 2010c):1090–101.

Porter, Gina, Kate Hampshire, Albert Abane, Augustine Tanle, Kobina Esia-Donkoh, Regina Obilie Amoako-Sakyi, Samuel Agblorti and Samuel Asiedu Owusu. 'Mobility, Education and Livelihood Trajectories for Young People in Rural Ghana: A Gender Perspective'. *Children's Geographies* 9, nos. 3–4 (October 2011): 395–410.

Porter, Gina, Kate Hampshire, Albert Abane, Alister Munthali, Elsbeth Robson, Mac Mashiri and Moving Young Lives. 2017. *Young People's Daily Mobilities in Sub-Saharan Africa*. London: Palgrave Macmillan.

Porter, Gina, Albert Abane and Karen Lucas. 2020. 'User Diversity and Mobility Practices in Sub-Saharan African Cities: Understanding the Needs of Vulnerable Populations'. Position paper. The state of knowledge and research. *Mobility and Access in African Cities*. 1–38.

Porter, Gina, Emma Murphy, Fatima Adamu, Plangsat B. Dayil, Ariane De Lannoy, Saerom Han, Mansour Hichem, Claire Dungey, Hadiza Ahmad and Bulelani Maskiti. 'Women's Mobility and Transport in the Peripheries of Three African Cities: Reflecting on Early Impacts of Covid-19'. *Transport Policy* 110 (September 2021): 181–90.

Punch, Samantha. 'Childhoods in the Majority World: Miniature Adults or Tribal Children?' *Sociology* 37, no. 2 (May 2003): 277–95.

Romero, Vivian. 'Children's Views of Independent Mobility during Their School Travels'. *Children Youth and Environments* 20, no. 2 (Fall 2010): 46–66.

Rink, Bradley. 'Capturing Amaphela: Negotiating Township Politics through Shared Mobility'. *Geoforum* 136, no. 4 (June 2020): 1–10.

Ross, Nicola. '"My Journey to School …": Foregrounding the *Meaning* of School Journeys and Children's Engagements and Interactions in Their Everyday Localities'. *Children's Geographies* 5, no. 4 (December 2007): 373–91.

Salo, Elaine R. 2018. *Respectable Mothers, Tough Men and Good Daughters: Producing Persons in Manenberg Township South Africa*. Bamenda: Langaa RPCIG.

Shefer, Tamara, Anna Strebel, Cheryl Potgieter and Claire Wagner. '"Sometimes Taxi Men Are Rough": Young Women's Experiences of the Risks of being a "Taxi Queen": Research and Theory'. *African Safety Promotion* 9, no. 2 (January 2011): 1–24.

Toska, Elona, Lucie D. Cluver, Mark Boyes, Marija Pantelic and Caroline Kuo. 'From "Sugar Daddies" to "Sugar Babies": Exploring a Pathway among Age-Disparate Sexual Relationships, Condom Use and Adolescent Pregnancy in South Africa'. *Sexual Health* 12, no. 1 (March 2015): 59–66.

Uhegbu, Uchenna Nnabuihe and Miles R. Tight. 'Road User Attitudes and Their Reported Behaviours in Abuja, Nigeria'. *Sustainability* 13, no. 8, 4222 (April 2021): 1–16.

Woolcock, Geoff. 2019. 'Child-Friendly Third Places'. In *Rethinking Third Places: Informal Public Spaces and Community Building*, edited by Joanne Dolley and Caryl Bosman, 56–72. Cheltenham, UK: Edward Elgar.

Youth Explorer. 2021. Accessed 29.6.2021. https://geo.youthexplorer.org.za/#geo:CPT.

Chapter 4

THE (IM)POSSIBILITY OF SPATIAL AUTONOMY FOR YOUNG CITY DWELLERS

Nadja Monnet
Laboratoire Architecture Ville Urbanisme Environnement (LAVUE),
École Nationale Supérieure d'Architecture de Marseille, UMR 7218, CNRS

Introduction

This chapter examines how it is (im)possible for young people (children and adolescents) to move around the spaces of their daily lives autonomously. Why have some age groups all disappeared from the streets, except at the start and end of the school day? The focus is on the spatial dimension of social phenomena, an element rarely explored; increased traffic, the dangers of the road and fear of kidnapping or sexual assault are more often blamed for this. Connecting what goes on inside and outside homes explains the causes and consequences of this situation. Examining these gradual transformations allows directing the lines of thought toward identifying the reasons behind young people of all ages retreating into contemporary domestic spaces, whether deliberately or unintentionally. The events occurring between home and school indicate what becomes (im)possible for young people when it comes to freely exploring their world. Of all daily trips, the journey to school has come under particular scrutiny in recent decades, both from civil society (with the emergence of walking buses, school and play street schemes, etc.) and in the academic community, where interest has grown to include the habits of children outside institutional settings (home, school, etc.). This clearly requires from researchers to rethink their methods. The chapter concludes with considerations about methodology, aiming not to offer a way forward but to challenge approaches to conducting research with the younger generations. This final section should encourage reflection about

the methodologies put into action in research and with the children and adolescents concerned, rather than attempting to understand them through the adults' voices.

The reflections below result from several years of questioning the place of children (from early childhood through to young adulthood) in increasingly urbanised societies. This line of thought comes from the research group AFIN,[1] through a study on adoption and adolescence which looked at how young people adopted from outside Catalonia moved around the city of Barcelona and perceived its public spaces. The researchers also examined the ways the adopted children bring diversity into the wider community, and the resulting changes to the evolution of society (Monnet, 2022). The scope of the study was then expanded, from looking at adopted children to examining the place of children and adolescents in Barcelona (Monnet and Arias 2016). The lines of thought from the French perspective come from teaching modules in the schools of architecture of Versailles, Toulouse and Marseille, designed to encourage analysis and debate surrounding the place of children and adolescents in different local settings (cities, towns, villages and suburbs).[2] Furthermore, as a parent and inhabitant of three European cities (Barcelona, Toulouse and Marseille), the researcher and author of this chapter was able to make regular, long-term observations on the habits of children at the start and end of the school day, combined with formal and informal conversation with teachers, other parents or adults and young users of these locations. Lastly, the Adventure Playground's research project[3] (Des terrains d'aventure du passé/pour l'avenir, TAPLA) led to examine unstructured play and free access in children and adolescents.

---

1 AFIN is a pluridisciplinary research group of the Universitat Autònoma de Barcelona in Spain, set up and led by anthropologist Diana Marre, which has focused on intercountry adoption for over 20 years. It has recently broadened its scope of research to include topics on different life stages, types of families and ways of (re)producing them. For further information, go to https://afin-barcelona.uab.cat/.

2 I would like to thank the students of architecture schools (ENSA) in Versailles, Toulouse and Marseille with whom I had the pleasure of exploring these issues, and whose questioning, work and research stimulated my own thinking and forced me to define it.

3 The TAPLA project (*Adventure playgrounds in the past/for the future*) is led by Gilles Raveneau (Université Lumière Lyon 2) and Clothilde Roullier (France's National Archive), and funded by the Labex Cluster of Excellence *Pasts in the present*, Université de Paris Nanterre (September 2020–June 2023): https://tapla.hypotheses.org/.

Stages of Childhood and (Im)possibility of Using Public Spaces

The place of children in cities, debated more widely in the English- and Spanish-speaking worlds, has become more important in France in recent years.[4] Ariès' founding text from 1979 is still highly relevant in understanding the profound transformation of the child's status in cities (Ariès 1993). While it attributes the current low numbers of children in the street to increased traffic, it also identifies other factors, albeit in less detail. This shows that societys view of children has changed. Ariès described the younger generation as having an important role to play in France's pre-Revolution society and actively contributing to the smooth running of the community. Children performed menial jobs, trade apprentice tasks and work considered 'impure' (picking up litter, washing corpses, etc.), but which their transitionary status to adulthood allowed them to do without defiling themselves.

The legislation was gradually introduced, prohibiting children from working and making school attendance compulsory – first at primary and later at secondary level – thus reducing their presence in the streets and removing them from daily life's machinery, which gives society structure. Doctors, psychologists and other childhood and adolescence specialists later put forward scientific support for this movement, defining the age groups from early childhood to adolescence and their specific needs and care. Where it was once more of a community effort, responsibility for children's education has been tightening around the parents or legal guardians. Adding societal pressures to this, the invention of playgrounds and other facilities that shape children's leisure time makes a parent who 'lets their child hang about the streets' a bad parent. This view, widely perpetuated by the media, exerts a particular influence on the fears of adults. Although deserving closer examination than is possible here, all these mechanisms affect the possibilities and impossibilities[5] of children's presence in public spaces.

Anthropologist and relationship expert Godelier (2004) writes that in the West, today's societies are not only characterised by the place they give to childhood, but by the desire to have children, and satisfying this desire at any

4 The issue on the subject in the online journal *Métropolitiques.eu* (https://metropolitiques.eu/Les-enfants-dans-la-ville.html) marks a turning point in French urban studies. A French translation was recently published (2019) of *La cittádei bambini* (1996) by Italian educational psychologist, Francesco Tonucci, who led an extensive network of think tanks on the 'City of Children' in Italy, Spain, Latin America and Lebanon.

5 Some could be described as 'societal' (laws, layout of the space), while others are interpersonal negotiations, highly conditioned by adults' desires and/or fears.

cost and by any means (adoption, artificial insemination, assisted reproduction or gestational surrogacy). Our Western societies have set the categories of childhood and adolescence very much apart from the rest of society. These age groups are seldom viewed jointly in scientific literature; there now exist childhood and adolescence experts.[6] Children are seen as fragile and precious assets needing our protection, or as vulnerable versus dangerous in the case of adolescents. They are protected by laws compelling parents or legal representatives to exercise their full parental duty until they have reached the age of majority.[7] The four aspects of this moral and legal duty are health, education, welfare and morality. 'The authority of parents is a personal and moral responsibility, but it also has a "public order function", it is a social obligation on all citizens' (Godelier 2004, 566). The sociologist Fize (2016) adds that societies exclude the young to avoid having to create a place for them and informing discourse which positions children at a disadvantage (as they are less experienced, immature, etc.). It is telling that little is known about the struggle of young people against not being permitted to work and being made to attend school over the last two centuries, or the experiences of the 'republics of children' before and after World War II.[8]

In our societies, the younger generations are rarely allowed to participate in public debate; true to the definition of the Latin term *infans*,[9] they are voiceless beings whose opinion is not considered, they do not have the possibility to express themselves publicly and are often thought of incapable of judgement. Although the Convention of the Rights of the Child of 20 November 1989 recognises full citizenship from birth, Western societies struggle to acknowledge that girls and boys are not 'adults in training', or future citizens, but full co-citizens in their own right. They are seldom consulted when organising their living environment. Their voices are ignored not only when designing the public spaces of our living environments, but also from public debate on the structure of our cities.

---

6 As I explain below, I take a different view here and consider it necessary to think of these age groups together.

7 AFIN research group in Barcelona has identified emancipation of minors at 16 years of age in some adopting families, so as to cease having responsibility for the actions of the people with whom they do not consider having possible ties. Another way of resolving family conflicts and delegating some responsibility to their adopted children is to enrol them into private or public boarding schools.

8 Two recent publications on the subject cover the milestones: Boussion et al. (2020) and Bonnardel (2015), republished in 2020 with a foreword by Delphy.

9 Literally, 'the one who does not speak'.

Designing Spaces for Children and Adolescents

In these increasingly restrictive conditions, it is understandable that parents and guardians try to limit the risks to their offspring. There is tight control on when and where children can go out, and specific amenities specialise in receiving young populations, first by sex (girls' and boys' primary schools during the nineteenth century), and then by activity: primary and secondary schools, sixth form or further education colleges, playgrounds, sports fields, leisure centres, etc. A recent trend has been to separate play areas by age groups (2–5, 6–10 and 11–14 years).

These phenomena, initially a trend among city-dwellers in that they began in towns and cities, have since spread out and are now in evidence in all areas. Without examining global urban trends here, or the intuitions of Henri Lefebvre – who in the 1970s predicted the complete urbanisation of society[10] – it is important to point out that what is happening in what is left of 'our countryside' is certainly linked to urban practices. One student, who comes from a 'small village' in the Rhône-Alpes region, observed that unlike her, her younger sister (10 years her junior) did not cycle to school, but was collected by the school bus in the morning and dropped home in the evening. We should be aware that we tend to separate the travel practices of young people into suburban and/or rural areas (see Devaux and Oppenchaim 2012 or Didier-Fèvre and Rougé 2019), setting them apart from what happens in cities or mega-cities, when there are clear societal trends overall.

In the West, the gradual separation of public and private spaces over the centuries is now embodied into 'space' and 'people'. As a result, children are spending more and more time indoors. The layout of external space has spatially defined the public sphere, but current architectural thinking has also organised how we use our homes (Monnet and Boukala 2018). This differentiation between spaces and the organisation of the age groups is not incidental. While research on children and adolescents does not usually combine the age groups, here they are considered together. The correlations between interior and exterior design are rarely mentioned when considering the dwindling presence of children in public spaces. Our homes are becoming more spacious and comfortable, with a wide and ever-increasing choice of multimedia devices (from radio and television to PC, tablet and smartphone), and are certainly responsible for the desertion of our public spaces as they become more ordered, standardised and even hostile for children to explore at their will. In France, for example, the adventure playgrounds which

10 He writes: 'We will use the term 'urban society' to describe the completely urbanised society, which today is virtual, and tomorrow will be real' (Lefebvre 1970, 7).

began appearing in the early 1970s, inspired by what began to unfold across Scandinavia in the 1940s, had all but gone by the late 1990s.

According to Paquot (2017, 22), Danish landscape architect Sørensen was the first to talk about adventure playgrounds in 1931 when he said: 'We could set up junk playgrounds in suitable large sites where children can play with old cars, boxes or timber. We might need to provide a certain amount of supervision to stop the children fighting and prevent injury, but this may well be unnecessary'. In 2009, an adventure playground in Marseille's Castellane district closed after 30 years, the last of its kind in the city. We now see playgrounds with a design and range of equipment that is ever more standardised across the cities and capitals of Europe. Sand is banned for hygiene reasons, and the ground has gradually been recovered with a soft, 'safer' polyester surface. While the incidence of serious head injuries does not seem to have reduced, there has been an increase in injuries caused by minor falls (bruising, ankle or wrist fractures, etc.) because parents and children pay less attention to the risks taken and think that bad falls are less likely to occur in these areas than elsewhere.[11]

Based on these findings, initiatives are currently underway to give children back some freedom by reopening adventure playgrounds like Belle Beille in Angers (Artières et al. 2020[12]), or by providing different spaces from those in the playground catalogues which can be explored without the constant presence of adults. The landscape agency Base (Paysage/Urbanisme) has recently begun to offer original designs that use the site's particular features, such as the Parc de Belleville in Paris' 20th *arrondissement* where a play area hugs the hillside, working with the site's natural slope. In Lyon, the sloping wall in one of the play areas of Parc Blandan is giving children new freedom of movement away from the watchful gaze of adults. Parents were anxious when the park opened in 2013 when it became apparent that they could not accompany their children on the climbing equipment as the entrances were too narrow for adults. However, as one person said, once parents saw that their children were managing fine and

11 On noting with surprise that there were no swings in any Paris parks, I asked acquaintances about it who told me that all swings had been removed by order of the Mairie. Legal proceedings had been taken against the Mairie by the parents of a child who had suffered a fractured skull when playing in a park. I could not find any record of this event, but the absence of swings seems to have become the norm in French public spaces, at least those I have visited.

12 In France, following this initiative, the concept is gradually spreading to all regions of the country. In summer 2021, 17 adventure playgrounds opened for a number of weeks, one for several months.

not hurting themselves, they were happy to return. Initiatives are increasing to develop play areas which abandon the climbing frames and allow greater inventiveness and creativity in their users. The way to go is still long before play models designed *by* adults *for* children, obeying adult rules, is abandoned. Both Breviglieri (2013) and Curnier (2014) show how urban design standardises and controls play. As Francisco Tonucci puts it, 'the child is more like a hamster [running in its traditional wheel] than an explorer or adventurer or inventor' (Tonucci 2019, 47).

While the view of children is starting to come into play when reconfiguring exterior spaces, adolescents are still missing from the landscape. They often make do with any private place near their home or school, regardless of any facilities it might offer. A comparative study of adolescents in Paris and Lisbon, conducted by Ramos and de Singly (2016), shows that young Portuguese have more room for manoeuvre to make 'their own world' or 'corner' in Lisbon than their French peers, whose movements are more tightly restricted. The study's authors stress that while these locations do not necessarily have to be far from their homes, adolescents have to feel like they are somewhere else. At such moments and in such places, 'the unplanned and improvisation are key' (Ramos and de Singly 2016, 63). They value 'hanging out', 'letting things happen', 'being spontaneous' and 'floating' in time, free from the clock-watching of adults. The group is more important than where it meets or how to get there; the key element is friendship and belonging to peer groups which insulate and protect each other. Ramos and de Singly also explain that going out in the evening tends to be intergenerational in Portugal. If not in the company of their parents, teenagers are happy to go out with other family members (older siblings, cousins, etc.) or neighbours. In contrast, young French people socialise more with peers from their generation (Ramos and de Singly 2016, 65).

To avoid turning our cities into programmed, infantilised play cities, the issue is not so much about creating yet more brandnew spaces for young people, but instead rebuilding the links between urban spaces and the different generations and age groups. We will need to leave more undefined spaces in our towns and cities, and also trust young people's good reflexes, as well as have faith in the acts of kindness to children from other city dwellers, which turn our living environment into an urban society. Giving the street (back) to children means letting them outside and allowing them the freedom to explore their surroundings actively. This will require them 'to feel relevant and useful and not just occupied and taken care of […]. We will ultimately have to give them back the land on which our predecessors built the city, and allow them the time and space to play in it' (Brossard-Lottigier 2015, 60–61), without constantly defining and carefully planning their time, and denying

them the chance to give their input. But will it be enough for children and adolescents to stop being 'just place users' and become actual 'space creators', to quote Legué (2015, 51)?

Getting to School

Looking at how children travel from home to school and vice versa, a new trend has been emerging over the last few decades to stop producing children who are constantly driven around and who have no direct contact with their surroundings other than through the window of a car or bus. The notion of counting footsteps (or hoofsteps in Ungersheim,[13] Alsace) has been reintroduced through initiatives like walking school buses in France and Canada which 'pick up' children (see Chapters 8 and 9 in this volume). They are run and organised by adults to walk even the youngest children to school, letting them experience the journey to school in another way. For Thomas (2007, 24), 'walking allows the pedestrian to be both experiencing and creating the city'. Walking in our towns and cities is important not only in terms of sustainability and urban renewal but 'because it is an activity which by its very nature anchors the pedestrian in the city' (Thomas 2007, 24).

While walking roots a person in their environment, how we walk depends on the context and is not innate. Learning starts at home, then at school in France through the road traffic lessons provided by the police to teach the highway code and pass a pedestrian test. Granié (2010) shows that children's behaviour is influenced more by the adults they meet when they are out than by what is taught, and sometimes practised, at school. When children regularly see adults breaking the rules, the theory they have learnt in school literally falls by the wayside. In contrast, one 10-year-girl was proud to say that she was the only member of her class to correctly answer a question in her pedestrian test because she remembered what she did with her mother when they got off the bus and crossed the road. Young people gain confidence from the situations they encounter and practice every day, but for their self-confidence to grow, the adults responsible for them must also have confidence.

The results of observations in this project show the emergence of a parent profile (with a higher level of education) who is open to their children travelling independently, but makes sure they carry a phone to

13 Following the example of Totnes in the UK, which has been working since 2006 to achieve energy and food self-sufficiency by 2030, the 2,300 residents of Ungersheim are taking more actions to make it a transition town. One measure is a horse-drawn carriage for school transport.

geolocate them when they are out,[14] while parents in poorer neighbourhoods concerned about their children's safety escort them right up to the school gates until relatively late into their schooling (sometimes up to the age of 15). Reports circulating locally and internationally on road accidents, kidnappings and bullying directly influence the level of control exercised by adults on the journey to school.

Viladot, a social psychologist from Catalonia, showed that the number of children walking or cycling to school in 2013 had fallen sharply compared with the 1960s and 1970s (Viladot 2013). This was in spite of the steady decrease in road accidents and the fact that abductions and rapes most frequently occur within close circles of acquaintances, and that it is unlikely for a stranger to commit such acts with a child seen on the street. Palomar, an Italian architectural collective (Palomar, 2009), talks about the 'ordinary non-autonomy' of young children living in urban areas. Their paper describes how it is impossible for a six-year-old child who has permission to walk home unaccompanied to do so because he is constantly being taken back to the point of departure (the classroom) by adults: first by a teacher who sees him walking alone in the playground, then the parent of a pupil when he manages to leave the school grounds and finally a policeman who sees him on his own at a pedestrian crossing. A child seen without adults or other children in a public place (town square, street, beach, etc.) is generally considered to be lost and quickly taken in hand (sometimes the police are called), without being asked for an explanation first.

There can be disparity between the perception of risk by adults and children (Godillon and Cloutier 2018). In Barcelona, work was conducted with groups of children from two primary schools situated close to each other but with families of different socio-economic profiles (Monnet and Arias 2016). The girls and boys were more worried about the weather,[15] lack of illumination (dark corners or alleyways) and certain passers-by (described as drunk or sleeping

14 An architect in her 40s, who has lived in Marseille's city centre for several years, told me that when her daughter started walking to school on her own, she gave her a mobile phone and also set up a system to track her journey. She introduced her to a number of shop owners along the route between their home and school and gave them her business card so that they could call her if they did not see her passing at the expected times. One young mother (educated to thirdlevel) living in Barcelona's old town also told me that she was not worried about her daughter going to school on her own because all the shop owners along the way knew them. However, here the child did not have a mobile phone and was younger than the child in the previous case.

15 One 10-year-old girl told us that she was scared of going to school on her own when it was raining.

rough) than by traffic or fear of being kidnapped. Although they sometimes mentioned these aspects, they were very rarely first on the list.

Time to Break the Clichés?

The first playgrounds appeared in England and the United States at the turn of the twentieth century and, as highlighted by several authors (Murnaghan 2016), were initially intended to discipline children. According to Gauzin-Müller (2015, 100), in the United States 'in 1920, the 700 or so playgrounds were part of the American dream of integrated immigrants and the total assimilation of future adults'. Designed to 'channel the energy of working-class children who hung about the streets of increasingly populated cities' (Gauzin-Müller 2015, 100), their presence provided a distinction between activity in the streets, seen as disorganised and lawless, and in supervised playgrounds where children were taught good civic conduct. Two types of childhood developed in the consciousness: 'well-brought up' children who went to playgrounds, usually with adults, and those who were 'a law unto themselves' and continued playing in the city's streets, alleys and waste ground. This group was represented as the children who 'hang about in the streets'.[16] Differentiating types of childhood in this way is often still present in our representations when we see children in the street. An imaginary childhood has been created and broadcast through photographs and film, where the poorer classes have more freedom to roam, while the movements of middle-class children in cities are more closely channelled.

In scientific literature, the working-class versus wealthier classes opposition is clearly evident when examining children's relationship with the street. Middle and upper-middle class children are often presented as having a broader outlook of their city because they move around it more, whereas the working classes stay more within their 'neighbourhood'. Rivière (2017a) develops the idea that in areas with a broad social mix, children from poorer backgrounds build a 'dominant' relationship with their neighbourhood, while middle and upper-middle class children tend to have a 'dominant' relationship with the city, and a 'dominated' relationship with the area in which they live.

The observations made over the last five years by the author of this chapter as a mother and resident of Marseille leads her to qualify somewhat this way of

16 Adventure playgrounds were designed as an alternative to playgrounds and originally described as places where young people were getting off the streets.

presenting information. Marseille's 13th *arrondissement* is a district where two state school complexes (nursery and primary) and a large private school covering all academic years[17] are adjacent to one other. The personal accounts of the private school students[18] show almost no relationship with the city, other than between school and home, and from home to other more distant areas where they socialise (in other districts, cities in the region or beyond, or abroad). One 12-year-old girl living in the 12th *arrondissement* and attending school in the 13th recounted the first time she took the Marseille Metro: 'It's funny! I've taken the Paris Metro and New York subway, but I've never been on this!'. Children whose parents have the option of enrolling them in schools outside their catchment area or in the district's private school seem to keep tight control of their children's movements. They are often met by an adult at the school gates (whether they walk or drive), and if not, usually have to take a certain route and are tracked via a mobile phone app. It can reach the point where parents now know when their children are entering or leaving the school grounds and even what they eat for lunch because of (or thanks to) the monitoring devices in place at both public and private schools.

One 11-year-old girl used to travel to school alone and attended one of the state schools mentioned above, only 20 or so metres from her new private school. After a few months in the new school, she asked her parents to take her, saying that she was scared to go on her own. Was she actually scared, or did she just want to be like the other students? Could this alignment practice, described by Rivière in adults, be the child's initiative here? This author mentions a 'level of porosity in parenting' (Rivière 2017b): parents start allowing their child a bit more freedom when they see younger unaccompanied children than their own in the streets. Coming from the other angle, the mother of a 12-year-old boy mentioned that her son decided to take the metro as he had become aware of the state of the planet and had asked his mother to stop driving him to school. She agreed to this with much hesitation and on the condition that he text her as soon as he arrives and leaves a place so that she knows he is safe. These examples show that decisions are not made unilaterally as autonomy develops and can be negotiated from both sides (see Chapter 1).

---

17 The 13th *arrondissement* is situated on the city's northern side and has a very diverse urban fabric made up of small streets with plots of individual houses and three- to four-storey apartment blocks, alongside large developments with buildings of up to 20 floors, for the most part owned collectively. One is on the council list of ownerships which is 'in great difficulty'.

18 These are not intended to be representative and are included for consideration.

In proportion to their size, students of the two aforementioned public schools walk to school only as often as those attending the private school. The number of children walking to and from school unaccompanied is low. Either an adult accompanies them or they move around in peer groups or with siblings. The two worlds coexist without mixing, except in the gardens of families of the same background where the children from both schools meet when their parents are socialising. As the only public spaces available are small *places* where parked cars have taken over, there is little incentive for the children who live in the streets around the schools to go out. Parents prefer them to stay in the house or garden; most are forbidden from going out in the district. For those who are allowed, the impression they get from friends, family and even teachers of the dangers of walking around the area, or the deterioration they see for themselves when passing through these spaces, is a strong deterrent. As a result, their relationship with the city is extremely shallow. Even when they use public transport, they do not usually have a 'dominant' view of the city because their trips tend to be functional (home to school, school to a family member's home or extracurricular activity).

Often described as 'stuck' in their locality, children from poorer backgrounds have a more developed use of the streets near their home and further afield. They may be tasked with collecting younger siblings or carrying out domestic chores (shopping, looking after younger siblings, escorting a family member to the doctor), thereby using the spaces around their home more intensively (parks, squares, streets, shops, shopping centre, local services, etc.). As they tend to walk, they are very familiar with their neighbourhood and know every hidden corner. The 'dangerous' or 'no-go' areas are much more concrete to them than to children who are driven to school and who get to know their city through a car or bus window, or from metro station names.

As mentioned above, children from working-class backgrounds also have their movements tracked. However, they appear to be more relaxed when they move around in groups (if unaccompanied by adults, they are rarely seen walking alone). Their presence in the streets is also primarily due to living in cramped apartments where they do not have their own space. Novelist Brigitte Giraud, who grew up in a priority development area in Lyon, describes how in the public housing estates, the outside has become the 'natural extension of their habitat' (as quoted in the Tribunes section of Le Monde on 9 May 2020). To some young people, the communal areas and/or the entrances of tower blocks and apartment buildings are their only personal space, as they may share a bedroom not just with siblings, but often with other family members. Zotian (2013) explains that some young people living in the Belsunce district of Marseille's old town spend their time in stairwells for some privacy. When asked where and in what position(s)

students usually did their homework, one boy replied that he worked best inside the wardrobe: 'It's the only place I get any peace!'. This was the only interior space where he was out of sight and could get away from his brothers and sisters fighting and his mother constantly asking him for help.

This example illustrates the importance of watching the use of space and its many variations. Jacobs (1961) talks about the view from the inside to the outside, which makes the pedestrian's journey more relaxed. Other variations are the milling of crowds and their furtive glances, or civil inattention and other particularly urban behaviour, described at length by Goffman (1963), which make interactions in public spaces possible and theftsmore complicated and riskier. There is also the watchfulness of parents and external societal pressures. Therefore, if young people are to be encouraged to move around and use public places, the issue is more about changing the 'way we watch' than social class; these watching games weigh heavily on the "archi-texture" of a place (Lefebvre, as quoted by Ingold 2015).

Hirsh points out that the child is 'the site of adult fantasy, fear and desire' (quoted by Snell 2016, 10). Therefore, it is the representations of adults that need to change, modelled on those of children. Independent mobility in young people starts when they learn about urban sociability, which is not just road safety but also requires us to consciously and permanently change our perceptions to reset fears and stereotypes (particularly with regard to sex, race and class). Studies in this field on the connections young people have with their surroundings are not exempt from challenging the impact of their findings on the stigmatisation of certain young age groups. Therefore, in Marseille, for example, an idea widely conveyed by public opinion and researchers expects children and young people from the middle classes and above to develop a more global view of the city, while children from the working classes should stick 'to their own neighbourhood'. Accompanied walks[19] with these young people reveal that they are just as likely to be made to stay at home as their peers living in other parts of the city. The way they move around the city is far from confined to their 'neighbourhood'. Young Marseille people from all classes have the same fears, and the routes they take around the city are dictated by their centres of interest.

Reflecting on how to identify the ills of Marseille and the connecting lines it lacks (Langevin 2018) – and describe the various populations without constant reference to the north/south divide and focusing on what they do not have (deprived and vulnerable people, limited access, less successful,

19 Conducted as part of modules on qualitative methods of field research at the École Nationale Supérieure d'Architecture de Marseille from 2016 to 2018.

less mobile, etc.) – could also become a force for change and cast a new light on the spatial autonomy of the city's young people.

(Re)claiming a Place in Society for a Place in the Streets

Thinking of children not as future citizens or city-dwellers in the making, but as people capable of thought and action recognises their potential for agency. Like autonomy, agency is not an innate quality, but is gradually learned throughout life through learning to react to situations, understanding that rules are fluid and are in constant negotiation. This creative capacity allows a person to question relationships assumed to be acquired, and challenges institutional injustice and discrimination. It is not so much a rebellion, but rather an act of resistance, carried out in the minutiae of daily life; talking to children about the dangers of crossing the road when the lights are against him, not allowing our children to pick on, tease or humiliate others because they are different; teaching all children that girls have just as much right to be out in the streets as boys. These are everyday situations which should be revisited time and time again.

More and more authors are highlighting the fact that the best playground for children's development is the entire city. However, the policymakers and designers of the urban fabric seem intent on separating children even further from the streets, by arranging and equipping spaces aimed specifically at them, like schools, parks, sports centres, etc. A study by Lehman-Frisch and Vivet (2011) on the practices of children at school shows that the moments of freedom available to children, and the transgressions which occur at such times, contribute to their social autonomy. The journey to school, the streets, town squares and parks are part of what some authors (as Camponovo 2021) described as 'third places', spaces between the home and the other institutions ordering our daily lives. These are spaces where 'informal' activities occur (Brougère 2007), spaces accommodating all types of play which enable and foster a sense of belonging.

To 'make these places amenable' (Paquot 2017), thereby improving intergenerational relations, changes must be made not only to the layout and design of the spaces between them but also to the imaginary of adults who have built up childhood and adolescence as categories in conflict with adulthood. The recent school strikes and demonstrations calling for a drastic rethink of climate change policy, and the demands made by young French citizens to change the voting age to 16, clearly indicate their desire for a more active role in the workings of the world, and pave the way for a shake-up of both sides. The adults need to work with the younger generations to reorganise social and spatial practices by changing how different generations view each other, and stop reducing children to the status of mere consumers of public spaces, designed *for* them but not *by* them. They need to feel empowered and have

greater ownership of their living environments. As Tonnelat (2016, 7) puts it, public spaces are far from the 'ideal places to make community-minded citizens'. They are much more than arenas where children are confronted with otherness and have to respond to it, even to the point of intimidation. They are 'places where the skills allowing citizens to move around outside their home or neighbourhood are learnt, skills which can be the foundation of the rules of anti-discrimination –"can" because these rules may not necessarily be respected or adopted, by individuals or governments' (Tonnelat 2016, 7).

In the hotly debated issue of digital use, young people can be viewed as a powerful force for a change in relationships with the world, rather than considering the young generation as one who is losing its way. That does not mean that the older generations have nothing more to contribute because, as explained in the world of neuroscience and environmental psychology, the context and qualities of all human relationships have no small impact on brains and on the understanding and vision of the world. All, young and not so young, need to renegotiate our differences, not through drastic action but on a daily basis, by inviting and encouraging people of all ages to occupy space differently, whether public or behind closed doors.

To Conclude (or Not): Walking and Working with the Younger Generation

The anthropologist Mead wrote the following in the late 1970s: 'It's a good thing to think about the child as long as you remember that the child doesn't exist. Only children exist. Every time we lump them together we lose something' (quoted by Ward 2020, 10). These now-famous cautionary lines also invite reflection on how this section of the population can be involved in research. For a long time, studies tended to be carried out *on* children rather than *with* them, and prioritised the adults' view of what they were saying and doing instead of directly asking children their opinion.

For decades, researchers in the field of childhood studies have wondered how to conduct research with children and adolescents, to discover how they feel, how they view the world and spaces they pass through and so on. This has led to the emergence of many protocols which all seek to increase children's and adolescents' involvement in the research, such as 'collaborative research', 'action-research', 'applied research' or 'participatory research'.[20] A range of

20 There is not space here to examine the different ways of conducting research with the people who are the research subjects. There has been much debate on the issue, some of which are available here (in French only): https://recherche-action.ch/ ('Recherche-action' on menu bar, 'Histoire' and 'Diversité des démarches' headings).

artefacts is deployed to encourage children to give their narratives, such as verbal accounts, or maps and drawings to illustrate their movements (Monnet et al. 2020). When examining the results, however, the adults' voices often dominate and interpret the analysis. There is little research into how to collaborate with young subjects to construct research protocols and produce results. 'Recognising in each other the ability […] to question and "conduct the investigation", to find meaning and apply an interpretation to reality'? (Nicolas-Le Strat 2017, 248) is far from the standard approach, but co-constructing the results is even more unusual. This might be the biggest challenge for future research. How can we *conduct research* with children and adolescents? What commons can be worked on and exchanged with children and adolescents so they finally feel that they have an equal role to play in the urban context they inhabit?

Nicolas-Le Strat's 'high-wind research' proposal (2017) is an attractive solution; he describes it as exceeding the usual methodological and research frameworks. 'This "image-word"', he writes, 'denotes a sociological practice that goes beyond any pre-established structure. It takes place outside the walls of methodology, in open ground. […] the research setting […] overlaps the many settings of life; it combines with them to form hybrids' (Nicolas-Le Strat 2017, 252–53). The methodology this author proposes is a combination of reintroducing words into practice, theory into activities and knowledge into habitual use. That means organising 'a strategy of action which affects our imaginaries, a strategy of experience which influences the way we live and the choices we make, and of course a strategy of words which assumes an antagonistic, creative relationship with language and culture' (Nicolas-Le Strat 2017, 20). In this perspective, there is no off-the-peg formula; every research project originates from the territory in which it takes place, shaped by its characteristics and those of its contributors. Every contributor is also required to step up to the challenge of transforming all his/her practices (research, professional, daily routine, individual and collective) and predispositions in order to shatter the boundaries of their beliefs and ways of operating.

References

Ariès, Philippe. L'enfant et la rue, de la ville à l'antiville, in: Ariès, Philippe, *Essais de mémoire, 1943–1983*. Paris: Le Seuil, 1993 (1979): 233–54.

Artières, Kloé, Baptiste Besse-Pantin, Rémi Cardier, Thomas Charlot, Simon Guillon, Damien Lulé, and Gilles Raveneau. L'aventure de Belle-Beille. *Sud. Volumes critiques*, n4 (2020) [online]. https://revue.marseille.archi.fr/laventure-de-belle-beille/.

Bonnardel, Yves. *La Domination adulte. L'oppression des mineurs.* Méréville: Le Hêtre-Myriadis, 2015.

Boussion, Samuel, Mathias Gardet, and Martine Ruchat. *L'internationale des républiques d'enfants* (*1939–1955*). Paris: Anamosa, 2020.

Brossard-Lottigier, Sylvie. Le jeu: un impératif éducationnel, in: Paquot, Thierry (ed.), *La ville récréative*. Gollion, CH: In folio, 2015: 59–80.

Brougère, Gilles. Les jeux du formel et de l'informel. *Revue française de pédagogie*, n160 (2007): 4–12. https://doi.org/10.4000/rfp.582.

Breviglieri, Marc. Une brèche critique dans la 'ville garantie' ? Espaces intercalaires et architectures d'usage, in: Cogato Lanza, Elena, Luca Pattaroni, Mischa Piraud and Barbara Tirone (eds.), *De la différence urbaine. Le quartier des Grottes / Genève*. Geneva: MétisPresses, 2013: 213–36.

Camponovo, Sara Rita. *Le chemin de l'école : une approche inter- et transdisciplinaire d'un tiers-lieu. Jeu, apprentissage et* agency. Geneva: Université de Genève [Doctoral thesis supervised by Frédéric Darbellay and Zoé Moody, Faculty of Psychology and Educational Sciences], 2021.

Curnier, Sonia. Programmer le jeu dans l'espace public? *Métropolitiques* [online] (2014). https://metropolitiques.eu/Programmer-le-jeu-dans-l-espace.html.

Devaux, Julian, and Nicolas Oppenchaim. La mobilité des adolescents : une pratique socialisée et socialisante. *Métropolitiques* [online] (2012). https://metropolitiques.eu/La-mobilite-des-adolescents-une.html.

Didier-Fèvre, Catherine, and Lionel Rougé. Grandir et vieillir dans les espaces périurbains: un même combat pour la mobilité? *Métropolitiques* [online] (2019). https://metropolitiques.eu/Grandir-et-vieillir-dans-les-espaces-periurbains.html.

Fize, Michel. *Jeunesse à l'abandon; la construction universelle d'une exclusion sociale*. Sesto San Giovanni: Mimesis, 2016.

Gauzin-Müller, Dominique. De l'aire de jeux au terrain d'aventures, in: Paquot, Thierry (ed.), *La ville récréative.* Gollion, CH: In folio, 2015: 99–114.

Godelier, Maurice. *Métamorphoses de la parenté*. Paris: Fayard, 2004.

Godillon, Sylvie, and Marie-Soleil Cloutier. Sur le chemin de l'école: perceptions de parents et d'enfants du primaire face au risque routier lors de la mise en place d'un Trottibus au Québec. *Enfances Familles Générations* [online], no. 30 (2018). http://journals.openedition.org/efg/2623.

Goffman, Erving. *Comment se conduire dans des lieux publics*. Paris: Economica; études sociologiques, 2013 (1963) (translated from the English by Daniel Cefaï).

Granié, Marie-Axelle. Socialisation au risque et construction sociale des comportements de l'enfant piéton: éléments de réflexion pour l'éducation routière. *Enfances, Familles, Générations* [online], no. 12 (2010): 88–110. https://www.erudit.org/fr/revues/efg/2010-n12-efg3899/.

Ingold, Tim. *Une brève histoire des lignes*. Le Kremlin-Bicetre: Zones sensibles, 2015.

Jacobs, Jane. *Déclin et survie des grandes villes américaines*. Marseille: Edition Parenthèses, 2012 (1961) (translated from the English by Claire Parin).

Langevin, Philippe. *Pauvres à Marseille; un besoin urgent de fraternité*. Rapport de recherche commandité par le centre chrétien de réflexion et le Secrétariat social de Marseille, 2018. http://alef-konseil.fr/alef/wp-content/uploads/2018/11/%C3%89tude-pauvret%C3%A9-Marseille.pdf.

Lefebvre, Henri. *La révolution urbaine*. Paris: Gallimard, 1970.

Legué, Pascale. Des villes pour les enfants? in: Paquot, Thierry (ed.), *La ville récréative*. Gollion, CH: In folio, 2015: 45–58.

Lehman-Frisch, Sonia, and Jeanne Vivet. Géographies des enfants et des jeunes. *Carnets de Géographes* [online], no. 3 (2011): 1–19.

Monnet, Nadja. Les paradoxes de l'adopté: des corps extraordinaires au sein de la nation catalane, in: Botea, Bianca D. and Dana. Popescu-Jourdy (eds.) *Pratiques de la diversité et de la citoyenneté. Statuts et expériences*. Paris : Éditions des archives contemporaines, France, 2022, pp. 43–52. ISBN: 9782813004215, https://doi.org/10.17184/eac.5585.

Monnet, Nadja, and Diana Arias. Se déplacer sans adultes en ville: récits d'autonomie de jeunes barcelonais. *Jeunesse: Young People, Texts, Cultures* (Special Issue of *Jeunesse* on Mobility), vol. 8, no. 1 (2016): 89–110.

Monnet, Nadja, and Mouloud Boukala. Urban Trajectories and Posturing: The Place of Children and Teenagers in the Makeup of the City/Postures et trajectoires urbaines: la place des enfants dans la ville. *Enfances, Familles, Générations* [online], no. 30 (2018). http://journals.openedition.org/efg/2763.

Monnet, Nadja, Sara-Rita Camponovo, and Zoé Moody. Co-producción de conocimiento al caminar con niños, niñas y adolescentes. Miradas cruzadas entre dos investigaciones llevadas a cabo en Suiza y España, *Sociedad e infancias*, n4 (2020): 43–53. https://revistas.ucm.es/index.php/SOCI/issue/view/3143.

Murnaghan, Ann Marie F. Disciplining Children in Toronto Playgrounds in the Early Twentieth Century. *Jeunesse: Young People, Texts, Cultures* (Special Issue of *Jeunesse* on Mobility), vol. 8, n1 (2016): 111–32.

Nicolas-Le Strat, Pascal. *Le travail du commun*. Saint Germain sur Ile: Editions du commun, 2017 (2016).

Palomar (collectif). Les enfants comme acteurs urbains, in: de Biase, Alessia and Monica Coralli (eds.), *Espaces en commun; nouvelles formes de penser et d'habiter la ville*. Paris: L'Harmattan, 2009: 207–24.

Paquot, Thierry. Aire de jeux; Améniser; Enfant, in: Paquot, Thierry, *Dicorue, vocabulaire ordinaire et extraordinaires des lieuxurbains*. Paris, CNRS éditions, 2017: 20–26, 30–38, 199–205.

Ramos, Elsa, and François De Singly. La construction d'un espace "à nous": la mobilité spatiale à l'adolescence. *Les Annales de la recherches urbaines*, no. 111 (2016): 59–67.

Rivière, Clément. La fabrique des dispositions urbaines; propriétés sociales des parents et socialisations urbaine des enfants. *Actes de la recherche en sciences sociales*, 1–2, no. 216–17 (2017a): 64–79.

Rivière, Clément. A l'école de la ville: scolarité et socialisation urbaine des enfants: regards des parents. *Agora. Débats jeunesse* 2, no. 76 (2017b): 39–52.

Snell, Heather. Shifting Places. *Jeunesse: Young People, Texts, Cultures* (Special Issue of *Jeunesse* on Mobility), vol. 8, no. 1 (2016): 1–19.

Thomas, Rachel. La marche en ville, une histoire de sens. *Espace géographique*, no. 1, t. 36, (2007): 15–26.

Tonnelat, Stéphane. Espace public, urbanité et démocratie. *La Vie des idées* [online] (2016). http://www.laviedesidees.fr/Espace-public-urbanite-et-democratie.html.

Tonucci, Francisco. *La ville des enfants; pour une [r]évolutionurbaine*. Marseille: Ed. Parenthèses, 2019 [1996].

Viladot, Maria-Àngels. *De la picaresca als videojocs; la infància com a mirall de la societat*. Barcelona: Editorial UOC, 2013.

Ward, Colin. *L'enfant dans la ville*. Paris: Eterotopia, coll. 'Rhizome', 2020 [1978].

Zotian, Elsa. Un petit coin d'enfance. Corps et socialisations enfantines dans un quartier de Marseille. *Corps* 1, no. 11 (2013/1): 203–12.

Chapter 5

THE QUALITY OF THE WAY TO SCHOOL LIES IN THE DESIGN DETAILS

Sonia Curnier
Postdoctoral Researcher, Laboratory of Urban Sociology, EPFL
(Ecole Polytechnique Fédérale de Lausanne)

Introduction

School routes are paths where children learn, gain independence, forge their identity and interact with other beings – be they human or non-human. Many aspects that determine this journey are of social and cultural nature. But the spatial shaping of the way to school can also prove very significant.

When it comes to the formalisation of school routes in urban environments, attention is generally focused on guaranteeing children's safety from traffic, at a planning level. This chapter argues that many design aspects also need to be considered to contribute to making this journey not only safe but also enriching and playful. Should the school journey be considered as 'a third place' (Oldenburg 1989/1999), it needs to be carefully conceived in its smallest details.

Through decisions regarding metrics, spatial divisions, paving, vegetation, lighting features, urban furniture, building entrances and ground floors, private property edges, city spatial designers – mainly architects, landscape architects and urban designers – can have a radical impact on the way children, and people in general, might experience these routes. Whether conscious or unconscious, every design decision will have a direct effect on future appropriation, by supporting (or impeding) some activities.

Rather than promoting specific solutions, design toolkits or absolute answers, this chapter is an invitation for practitioners to question their design decisions, through the lens of child friendliness and more specifically along the concept of 'learning on the way'. Admittedly, it is rather explorative than assertive.

The first two parts of the chapter focus on what it is like to walk to school in (European) cities and what can be 'learned on the way'. The focus then shifts to how design can contribute to enhancing this journey. Four main elements upon which designers have an influence – *ground, artefacts, natural features, edges* – are discussed. Finally, three principles – *polyvalent, equivocal and ordinary designs* – are introduced to help designers reflect on the effects of their interventions in terms of autonomous and informal learning on the way to school.

A Focus on Urban Active Transportation to School

As shown by the variety of contributions in this book, the way to school comes in many different forms and takes place in various contexts. For some children, it might mean walking daily for more than an hour to reach a place where they will get educated. In dispersed habitats settings, such as rural areas, many children walk down to the nearest bus stop that will take them to their school. Yet, as the world's population is increasingly urbanising, for at least half of the children around the world, the journey to school takes place in an urban environment (UNICEF 2012). In Europe, this proportion of children living in cities even reaches more than 70% (European Commission 2002).

Given this growth in the urban child population, contributions in the field of children studies focusing on urban life have flourished in recent years (Arup 2017; Danenberg et al. 2018; Gill 2021; Krysiak 2020; Tonucci 2006/2019 to only cite a few). Produced both in the realms of academia and practice, these publications all have an operational dimension, illustrating the extent to which design and planning practices are being renewed regarding this topic. Cities have often been perceived as a threat to children's health and well-being (pollution, danger), but many recently recognise some of the benefits of urban environments, such as access to great amenities, reduced energy consumption, exposure to diversity and closer connections with family and friends (Karssenberg 2018; Sim 2019). From a learning perspective, cities also tend to offer a greater variety of sensory, cognitive and emotional stimuli. However, their greatest attraction remains to other people (Gehl 2010).

The present chapter will thus focus on urban settings. Although many of the aspects addressed below are relevant worldwide, it is important to note that this text is inscribed in a European perspective. Indeed, despite variations in political cultures, economies, mentalities, climate and natural conditions, Europe shares a common urban history and democratic values, and thus relatively comparable forms and uses of public spaces (Curnier 2018, 2022). Finally, it seems worthwhile to specify that, although the capacity for learning and playing goes on for life, the following will focus primarily on

elementary school-age children (approximately 4–12 years). Beyond this age group, we enter the pre-adolescence period and the stakes of the way to school change, on many levels, such as routes and distances to travel, modes of transportation, and interests and learning.

Perceived, lived and conceived way to school

For children growing up in urban environments, the journey to school usually starts by entering a street. It then generally continues through a succession of hard-paved spaces – other streets, squares, back alleys – happily interrupted at times by green breathing areas – courtyards, community gardens, parks and pocket parks. In some contexts, this route might also cross some more singular places such as an urban wood, a waterfront or a playground. This sequence ends at the school premises. All these hard-paved and green open spaces – be they public or privately owned, children do not perceive the difference – form a network of movement at the neighbourhood level.

The journey to school is here described from a spatial planning or design perspective, as a conceived space picking up on Lefebvre's (1974) established triptych of *perceived*, *conceived* and *lived space*, also referred to in the introduction of this book. In a child's view – which is more of the order of the perceived and lived space – this journey is rather seen a succession of recognisable and meaningful places: 'I enter my street, notice the fountain where I need to turn left, stop and pause before crossing the dangerous big street, take a break by the wall where snails like to be on rainy days, continue towards the bench I fell from when I was 2 years old, pass by the garden where the old lady grows appetising tomatoes, pass by the bad-smelling garbage containers, stop by the door of my friend's home, finally spot my classmates frolicking in the school yard'. The succession of open spaces forming the way to school are also places where the child experiences and learns all sorts of new skills: watching the postman deliver the mail in front of the house, challenging him or herself to climb a tree, navigating the city by exploring alternative routes, meeting new friends or picking up a fallen leaf to take home.

Motorised versus active mobility

That is if the child's journey to school does not involve being driven by car. Indeed, parental chauffeuring is often a favoured solution for several reasons – from safety and security to intimacy, time pressure on families and networked daily life – even when the distances could easily be covered by active mobility (European Commission 2002; Fotel and Thomsen 2003). The motorisation of school travel has repercussions on children's ability to develop their

autonomy and to acquire a thorough experience of their neighbourhood and the city (Fotel and Thomsen 2003; Kyttä 2003; Prezza et al. 2005; Lewis and Torres 2010).

Fortunately, active mobility still remains a preferred option for many children. From a learning perspective, the slow pace of navigating the city by foot or bicycle is important as it allows 'for rich sensory experiences, social interactions and connection to the surrounding environment' (Sim 2019, 105). However, active mobility is often conducted under adult supervision, under parental accompaniment or in a more organised way, such as 'pedestrian school buses'. As a result, studies show an increasingly late beginning of independent active mobility – unsupervised by an adult – in several Western European countries in the past decades (O'Brien et al. 2000; Rivière 2016; Shaw et al. 2013; Skår and Krogh 2009).

Independent active mobility is important, as children experience their environment differently when they move around on their own or with peers (Granié and Torres 2021; Noschis 2006). This freedom of movement offers them an opportunity to acquire spatial skills, navigate cities and anticipate potential risks, and gradually expand their area of exploration (Hillman et al. 1990; Rissotto and Tonucci 2002). It also allows children to develop their identity, assert themselves, reinforce their self-confidence and extend their social network (Churchman 2003; Prezza et al. 2001). By actively and independently exploring their physical and social environment, children can then start investing it and thus become social actors, on an equal basis as grown-ups.

The School Journey as a Third Place: Learning on the Way

In this chapter, the issue at stake is not so much whether children can roam freely on their way to school, but rather how this route – accompanied or not – can become an enriching urban experience, a 'third place' as this collective book suggests.

Since the American sociologist Oldenburg first published *The Great Good Place* in 1989, his concept of third place has generated great interest, particularly in the urban research community (Dolley and Bosman 2019; Mehta and Bosson 2010). Even though Oldenburg dedicated a whole chapter of his book to youth, he did not reflect on the third place specifically from a child's perspective. Nevertheless, his theory has also sparked some interpretations among the child studies community, often adding an educational scope to the third place (Camponovo 2020; Camponovo and Moody 2021; Woolcock 2019).

While not all characteristics distinguishing third places in the eyes of Oldenburg are informative when it comes to transposing the concept to the study of school journeys, some elements prove intriguing. Several of them

will feed the continuation of this chapter. But to dive into the subject, the two-word expression will first be dissected.

The first part of the expression, *third*, insists on third places being a complement to two other main spheres of life, in the case of children: home and school. Thus, assimilating the school journey with a third place requires considering the way to school beyond a utilitarian commute from A to B. This vision acknowledges the in-between as a valuable space-time allowing for all kinds of experiences, learnings and self-developments. This idea of learning outside the home and school walls resonates with Dutch architect Hertzberger's image of the city as a macro-school (as a counterbalance of the school as a micro-city) (Hertzberger 2008). Yet, according to Oldenburg, 'the *raison d'être* of the third place rests upon its differences from the other settings of daily life and can be understood by comparison with them' (Oldenburg 1989/1999, 22). The question then is, what does the journey to school offer that school and home do not? One possible answer is that this journey allows for autonomous and informal learning, in contrast to structured and adult-led education. Of course, this form of learning will be increased in case of independent mobility. Still, even when chaperoned, children experience a sense of freedom and interact spontaneously with their environment and people, on their way to school.

The second part of Oldenburg's expression the *place* – rather than space, often used as a synonym – recalls the concept of placemaking, which has been increasingly present in urban discourse since the 1980s. Placemaking considers public space beyond its material dimension by envisaging it as a living space. A *place* can be seen as a stimulating, safe, comfortable and sociable environment, offering a wide range of activities and attracting a wide variety of people (see, for instance, Madden 2021). Yet, while Oldenburg associated the third place with a destination, in this case, it should rather be understood as an environment of (slow) motion.

Learning on the way

In this perspective, the free and autonomous learning that occurs while in motion can be described as *learning on the way*. This idea echoes Gill's expression 'play on the way' to describe incidental play opportunities accompanying daily mobility (Gill 2021, 144). The principle of not restricting children's play to playgrounds is currently being widely advocated (Arup 2017; Krysiak 2018) and particularly when it comes to designing school routes (Gill 2021; Johansson et al. 2020). This criticism towards playgrounds and the desertion of common public spaces by children actually dates back to the 1960s–1970s (Codej 1976; Jacobs 1961; Ward 1979/1990). But only

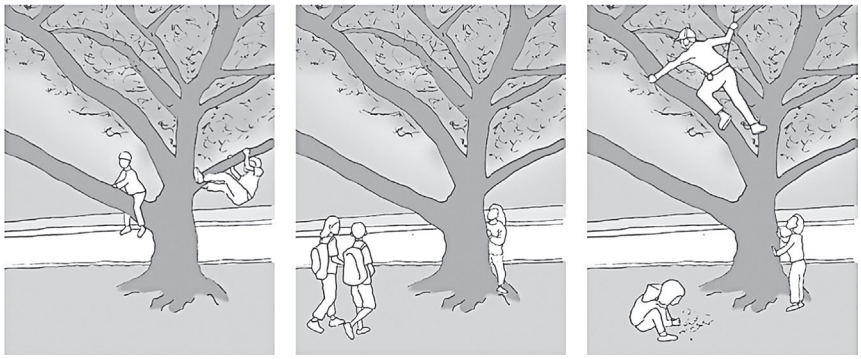


Figure 5.1 A tree on the way to school can support all three forms of learning: (1) bodily experience, (2) socialising with peers and (3) growing into engaged citizens

recently has the idea of extending play to the city in general has re-emerged in discourses and more importantly in practice (Curnier 2015; Stevens 2007). When it comes to children, autonomous learning often occurs through play, as a way to understand and change the environment. Thus, this association of play with motion, as conceptualised by Gill, will be extended to the idea of learning in this chapter.

Three forms of learning through play can occur on the way to school, in urban environments. The first is *bodily experience*, which corresponds to motor development and sensory experiences. Both other learnings draw on two functions of play identified by environmental psychologist Noschis: play as an opportunity for sociability and as an opportunity to make one's space in the world of adults (Noschis 1992, 2006). These are here defined as *socialising with peers* and *growing into engaged citizens*. Figure 5.1 illustrates how a public space design element on the way to school, a tree in this case, can support all three kinds of learning.

Bodily experience

First, an enriching way to school should arouse curiosity and encourage active exploration. It can be assimilated to a space for adventure and discovery. Diverse urban open spaces offer varied possibilities for bodily activities, responding to children's internal drive for movement, allowing them to develop 'physical strength', 'coordination' and 'sense of balance' (Lefebvre and Maulay 2014). Urban environments should also offer opportunities to face challenges, manage risks and overcome fear, in order to foster self-confidence, yet in a secure environment guaranteeing non-excessive hazards (Noschis 2006). To make this exploration more attractive and

formative, cities need to be appealing to the senses, in all their diversity, visual, auditory, olfactory and tactile. Child-friendly perspectives often neglect the need for children not only to observe but also to act upon this material environment, by touching, grasping and handling (Codej 1976).

Socialising with peers

Second, an inspiring school route should allow for contact with other human beings. In that sense, it resonates with Oldenburg's association of third places as being places for lively engagement, regular yet informal gatherings and pure sociability, with conversation as main activity (Oldenburg 1989/1999). Although Oldenburg insists on a 'good talk' as a key characteristic of third places, communicating in a child's perspective does not necessarily mean conversing, but it does mean interacting socially: smiling, exchanging a glance, imitating each other, sharing a secret, joking or even having a fight. The material world can promote, in many ways, social interaction while getting about, according to the principle of *social mobility* (Sim 2019). A network of routes and paths can be seen as a support for children to be in contact with their peers, by providing inviting and sheltered places to stay, meet and play, by creating opportunities for hiding and spying, but also by offering more quiet environments to retract from social life. This social interaction with peers will allow pupils to develop social skills – such as communication, conflict management, autonomy and identity affirmation – and a sense of belonging and collectivity (Codej 1976; Noschis 2006; Ross 2007).

Growing into engaged citizens

Third, the journey to school is the occasion to confront children, not only to peers, but also to the world of adults. Noschis (1992, 2006) insists on the importance for children to observe and assimilate the life of grown-ups from the perspective of eventually entering adulthood. The urban environment should thus promote encounters with the daily life of adults, ranging from neighbourhood acquaintances to familiar strangers or total unknowns. By lingering on the school–home journey, children overhear conversations, and learn how to express ideas, prevent conflicts or simply behave in an urbane way. They observe grown-ups working outdoors, such as construction workers, street cleaners, market stallholders or park gardeners.

Open and active ground floors also allow them to take a peek into what happens inside shops, office spaces, workshops, restaurants, gyms or even people's homes and gardens. Reversely, open and active ground floors offer 'eyes on the street', according to Jacobs' concept (1961, 35). This concept can

be summarised simply as follows: the more animated the street, the safer it feels. The visible presence of people in the street itself as well as in the buildings that border it contributes to a feeling of security through what can be described as an informal oversight. When it comes to children, this overview of public space from many adults allows for a form of mutual yet informal supervision. Therefore, open and active ground floors enhance children's perceived and real security, thus promoting their independent mobility.

This contact with citizenship, beyond the strict limits of places chaperoned by familiar adults such as schools and home, is necessary for children to affirm their role as citizens (Gill 2021; Noschis 1992, 2006). They confront themselves to otherness and diversity, and are able to understand the world as a place of multiple possibilities and choices (Racine 1999). This allows them to develop critical thinking and start making up their mind about the world (Jacobs 1961). This dimension resonates with the political role of third places stressed by Oldenburg in the Great Good Place (1989/1999).

In this perspective, it is just as important that the material world encourages children to become engaged citizens in the face of our planet's urgent climate and environmental challenges (Danenberg 2018a). Exploring and understanding the non-human realm plays a crucial role in fostering environmental awareness and promoting positive attitudes, besides the health and well-being benefits (Chawla 2015; Kellert 2002; Louv 2005). Designing urban landscapes should thus enhance opportunities for encounters with all living and non-living beings, not solely humans.

Shaping the School Journey: From a Planning to a Design Perspective

Contextual, cultural, sociological, political and economic conditions are significant drivers of the capacity of children to experience a formative journey to school. Their ability to move actively and extend the time they spend along the way may depend on a variety of parameters, including neighbourhood and cultural habits, local level of crime, traffic harm and parental control (Granié and Rivière 2021; McMillan 2005). Structural elements, which might seem secondary at first sight, such as school hours, might also allow or prevent children from taking the time to enjoy this journey. While not being able to solve these sociocultural aspects entirely, the shaping of the material environment can influence some of them.

In a simplistic way, the formalisation of urban environments takes place at two levels: planning and design. When considering the effects of urbanism on children's journey to school, many aspects need to be considered at the larger scale of planning: spatial distribution of schools, safe network of routes and

paths, urbanism, density and programmatic diversity (Granié and Rivière 2021; Johansson et al. 2020; Villanueva et al. 2016). Among these concerns, reducing traffic danger remains one of the main focuses. And for a good reason, traffic danger is the first cause of child injury deaths in the OECD (European Commission 2002; UNICEF 2001). Therefore, the effects of planning on children's safety have been widely explored by both scholars and practitioners. And of course, it is necessary in the first place to solve issues such as heavy traffic, difficult junctions, long distances and discontinuous pedestrian networks to guarantee children's safety.

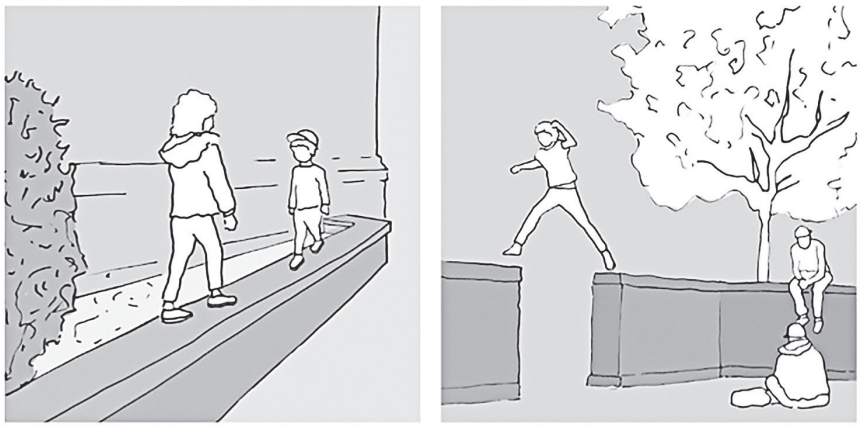
However, in order for the journey to school to become a third place – a real attractive, comfortable, social and stimulating environment – it also needs to be carefully designed, in its smallest details. According to Gehl (2011), necessary activities (moving, waiting, running errands) occur in public spaces regardless of their spatial qualities, while optional activities (relaxation, wandering, play, sociability, etc.) – and autonomous learning the author of this chapter would add – require high-quality outdoor environments to unfold. Relating this principle to the question of children, providing enjoyable school routes can only be achieved by offering pleasant and enticing urban environments, making the journey more than simply commuting from home to school. 'The battle for quality is on the small scale' adds Gehl, defining this scale as the '5 km urban landscape, where people encounter the city close up' (2011, 118). Now, the issues at stake on this scale are design concerns. Yet, so far, little attention has been drawn to the role of the design in supporting child-friendly mobility and cities (Johansson et al. 2020; Villanueva et al. 2016), not to say that very little is known about how the small scale can support enriching trips to school.

The scale of child-friendly design

A good example of how design details can contribute to providing enticing environments for children is the consideration of their scale and proportions. Anthropometric references can, for instance, help design an urban environment that is appealing at their eye level. For instance, between the ages of 3 and 10 years, the average eyesight of a Belgian child will rise from around 90 cm to 140 cm (Motmans and Ceriez 2005). As a comparison, the standing adult's average eye level is 160 cm. Although these anthropometric references may vary according to geographical context, ethnicity and gender, it is important to consider this gradual evolution from childhood to adulthood. In terms of design, acknowledging children's proximity to the ground implies conceiving buildings, ground floors and edges that are appealing to their scale. It also invites to design urban furniture and green elements that allow for children's overview of their environment (Johansson et al. 2020).

Children's visual perception is often cited in literature as an important aspect to pay attention to. But their bodily perception of place is just as important. For instance, a low wall will be perceived by a short child as a comfortable sitting opportunity if it is 30–40 cm high. That way, their feet can touch the ground. But for it to be easily climbable, it should not exceed approximately the height of their belly bottom. Above this level, it can become a challenge to climb on and to jump safely from it. Perhaps not something a child would spontaneously do on the way to pre- or middle school. For a preadolescent, though, an interrupted higher wall becomes a challenging feature, as shown in Figure 5.2. Bodily perception thus implies not only being conscious of children's height but also of their weight, proportions and strength in an evolving perspective (see, for instance, Kyttä (2003) developing these issues in relation to affordances).

Designing spaces where children feel welcome and taken into consideration, through scale for instance, allows them to develop a bond with the place. It participates in creating a congenial environment, a 'home away from home' as Oldenburg describes the third place (1989/1999, 39). This first feeling of security then allows them to explore further the unknown and unexpected, at their own paces. While anglo-saxons use the word design, when it comes to describing the shaping of new or existing public spaces, the French terminology *aménager l'espace public* can be inspiring in this sense. *Aménager* literally means making urban open space 'affable', as in friendly, pleasant, accommodating, caring and inviting.



Skt Olai Plads | Roskilde
MASU Planning

Figure 5.2 Children of different ages, proportions and motor skills experiencing the challenge of walking on a wall

An invitation to design consciously and carefully

Many different stakeholders have an impact on the physical shaping of public spaces at the detailed scale of design. In terms of project management, the main stakeholders remain public authorities, who are in charge of most public space designs. But as cities are collective entities and urban public spaces are usually bordered by buildings, private developers and investors should also be considered. Indeed, children perceive their urban landscape as the combination of all open spaces that are accessible to them. In their view, private property is only perceptible when clearly marked by a physical boundary. And even then, a wall and a fence can become a space to climb, a hedge a place to hide, as shown in Figure 5.3. Public authorities have the power to set rules for private developments through planning tools. But in the end, the architectural and outdoor spaces design details of buildings remain in the hands of private owners and influencing private sector developments remains a challenge (Gill 2021; Masboungi 2013). That is why it is only through collective awareness and efforts that the outdoor urban environment can become engaging for all.

Shaping child-friendly cities also requires giving children a voice in planning and design processes. Their integration into decision-making processes has become an important subject of research and concern of practice in the past years. Children's local knowledge and understanding of cities have come to be understood as very valuable (Tonucci 2002, 2019). As such, it is crucial to give them a voice and invite them to shape public spaces in co-creation processes when possible. Yet, although these types of practices are becoming more widespread, in the end, spatial professionals will

Figure 5.3 Children do not necessarily perceive private boundaries as such

most likely be in charge of framing these processes and guiding the design of most urban landscapes. They thus need in the first place to be made aware of the children's perspectives, needs and competencies, in order to better help them translate their ideas into designs.

When it comes to conceiving public spaces, the responsibility is in the hands of designers – mainly architects, landscape architects, urbanists, urban furniture designers – working in private firms or in municipal technical and maintenance departments. The subject has become so prominent in current urban discourses that it seems important to remind that public spaces design is a relatively young discipline. As a matter of fact, it has emerged – or more accurately has started reinventing itself – as a proper field of design since the 1980s in Europe. Along with this momentum of renewal, the idea of building more playful and enjoyable public spaces has begun making its way into spatial designers' minds (Curnier 2015). But in a first stage, a lot of attention has been focused on redesigning destination spaces (Curnier 2018, 2022). The future of the field seems to lead towards more quotidian spaces for everyday outdoor life, that of the neighbourhood, as illustrated by the recent rise of urban discourse on the 15-minute city (Moreno 2020). Taking this opportunity to include the child's perspective in this development seems quintessential, as the neighbourhood stands as their main area of reference (Gill 2021; Noschis 1992).

In order to make cities – and in particular the way to school – appealing for the youngest citizens, all stakeholders and in particular designers need to adopt a child-friendly lens when making choices impacting public space. They should be aware of the large spectrum of activities that need to be accommodated on this journey – be they passive (contemplating, resting, enjoying solitude, reflecting), active (touching, climbing, running, tumbling) or social (laughing, sharing secrets, negotiating, chatting). They also need to measure the impact of their design decisions – in terms of form, materiality and spatial definition – on the diversity of recreational appropriations of the public space left to future users. Moreover, as Hertzberger puts it, designers need 'to pause at every design decision and seriously consider whether it has an alienating effect or incites learning' (2008, 251). But before reflecting on how to help practitioners reflect on the impact of their design decisions, it seems necessary to describe what exactly they do design.

Design Elements on the Way to School

When it comes to shaping a safe, pleasant and enticing urban environment for children, spatial designers can act mainly upon three elements: *ground*, *artefacts* and *natural features*. A fourth element resides in the design of the *edges* of public spaces, namely the surrounding buildings and in particular their ground floors.

The ground

The ground represents the continuous surface where people walk. It is the first basic element of public space. When it comes to its design, the first critical aspect resides in its dimensions. For instance, expanding the public domain, forming a small pocket or niche along a straight sidewalk, can become an inviting place for people to stay and for small social groups to gather. On a wider sidewalk, activity from doorsteps in particular – such as neighbours meeting spontaneously and chatting in front of their entrance – can extend on the public space without impeding the trajectory of hurried passers-by. An ample public space also allows for indoor ground floor commercial or domestic activities to extend outdoors and thus contribute to enliven the city (Sim 2019). Cohabitation between different active transportation modes, user groups and paces – a child on a scooter, an elderly person with a rollator, a dad pushing a pram – is also made possible when the space is generous enough. Finally, on a vast space, urban furniture to lean, climb or sit on, or trees offering shelter can be added freely and thus support staying activities.

Second, the profile of the ground can encourage physical, playful and social activities. As cities are designed above all in a pragmatic and functional way, subject to circulation or maintenance issues, streets are usually planned as flat and straight as possible. But at a smaller scale level, an uneven street profile may include inspirational details. Unintentional depressions are seen by children as wonderful opportunities to jump into a puddle on a rainy day. It is interesting to note their ability to perceive these ground irregularities as potentialities rather than problems, as adults would. Unevenness helps them develop their sense of balance and motricity. Slopes are inviting to hurtle down, scoot or skate down. In northern countries, children are able to sledge to school in winter times, and any inclination is much appreciated. In more common situations, small level differences – on the edges of main pathways – can suddenly be seen as seating affordances allowing for a small break on the way or becoming a recognisable meeting point on the way to school.

Third, the paving plays an important role in the way children will experience an urban open space. For instance, cobblestones might limit the use of certain recreational travel modes popular with children, such as scooters, roller-skates or skateboard, while asphalt is perfectly suited for them. On the contrary, an intriguing paving might invite to spontaneously play hopscotch on the way to school. Linear details such as gutters, street painting or pavement marking become imaginary playful supports for children practicing walking in a line as if on a train track (Figure 5.4). They can also be interpreted as obstacles to be avoided as a challenge: 'let's try not to touch any line on our way to school'. Finally, through its different textures, paving becomes an important source of sensorial stimuli.

Figure 5.4 Ground. Lines and textures on the ground are support for children imagination

Artefacts

Public spaces are fitted with all kinds of *artefacts* (Curnier 2015), be they functional and necessary – bollards, benches, poles, bus stops – or added to improve urban experience – art interventions or playful fountains. From a child's perspective, these tridimensional objects represent important reference points for way finding and awareness of distances (Lingwood et al. 2015; Zdiara 2018). They are also seen as opportunities for all kinds of playful and physical appropriations. Necessary outdoor furniture does not need to be specifically designed as playful, to be interpreted as such by children. Bike racks, for instance, are spontaneously interpreted as structures to hang from or a course of arches to pass underneath, as shown in Figure 5.5. Information boards, used for cultural promotion, provoke thoughts, support imagination and spark conversations. Finally, artefacts are also seen as attractive points, fostering encounters and social interaction, such as fountains children love to gather around.

Natural features

It is often assumed that children living in urban areas have limited access to nature. But even though urban environments do not usually include wide natural areas, they offer many opportunities to connect with natural elements and non-human species, such as water, flora and fauna. The author uses the word 'natural features' to define design elements that either integrate

Figure 5.5 Artefacts. Children interpret functional furniture as playful supports

Figure 5.6 Natural features. Urban water drainage supports sensory experiences and opportunities to reflect on climate

non-human species or are conceived as habitats for them to develop. Street trees, bushes and urban water drainage are important sources of multi-sensory experiences, through their changing colours, sounds, smells, movement, reflection or cooling effects (Figure 5.6). As stimuli, they allow for children's cognitive, affective and evaluative development (Kellert 2002; Pyle 2002). While supporting local ecosystems, such urban natural features allow for children to observe living phenomena. They are shelters for urban

wildlife, such as insects and small animals. As flora and fauna change over time, they become supports for reflection and learning about the climate, the weather and the seasons. In the same spirit, observing the sky and clouds can be a beautiful and stimulating activity. However, we miss the opportunity if the urban environment obscures such views.

Children love to fill their pockets with rocks, chestnuts, acorns, wood sticks and all kinds of leaves they pick up from the ground. These precious *trouvailles* become elements for imaginative and reflective play (Arup 2017, 39). Just as tridimensional artefacts, natural features are also important points of reference for orientation and place attachment.

Edges

Public space is defined by the built elements – buildings, infrastructures, walls – that delimit it. Therefore, these elements play an important role, not only in shaping the void and its proportions but also in characterising it. Through their diversity, buildings act as landmarks, enchanters and triggers for conversations for children on the move in urban environments (Zdiara 2018). They play a quintessential role in activating public space. Their general design, particularly their capacity to foster informal oversight of urban open spaces, can contribute substantially to extending parents' surveillance through peers and thus to perceived safety. The importance of building ground floors – the first three vertical meters, in particular – has been stressed as important elements to create attractive urban open spaces (Sim 2019), and in particular when it comes to children (Gill 2021).

Through the recent identification of public spaces as living spaces – and the use of domestic imaginaries as a basis for description – the word 'plinth' has become widely used to refer to the foot of buildings, where architecture meets the city (Danenberg 2018b). As a threshold between home and the public realm, these plinths can be understood as reduced versions of the third place. They offer a safe environment close to home, yet in relation with public life (Canciovici 2018). The appearance, materiality and level of detail of plinths are particularly important when it comes to activating public space. When well designed, they offer opportunities for play and social interactions, as shown in Figure 5.7. Canopies and porches offer protection from weather and enable casual encounters to be prolonged. Low walls become places to escalate and jump from. Entrance ramps are spaces to tumble, while a few steps leading to the building main door are perfect as a meeting place on the way to school, a climbing feature or even an improvised auditorium to stage a show for schoolmates.

Figure 5.7 Edges. Well-designed entrances, rich in their details, provide many opportunities for motric challenges and sociability

An Appeal for Polyvalent, Equivocal and Ordinary Designs

When designing public spaces, practitioners and their commissioners need to consider many different factors. These factors range from pragmatic issues such as costs, safety, norms and maintenance aspects, all the way to aesthetics, site specificity, built heritage, biodiversity and adaptation to climate change. Yet, one fundamental question that needs to be constantly raised is whether the design of a public space is able to 'resist the critique of the user' as Italian architect and urban designer Viganò describes her working process (interview in Curnier 2018, 434). This means that, for every decision, a spatial designer should reflect on its consequences on the future appropriation of space. As sociologist Breviglieri puts it, the child invites the designer to dive into an 'imaginative work' by exploring the potential of a built environment through 'narratives of uses' (Breviglieri 2015, 6).

Avoiding prescription, as much as proscription: polyvalence as a key characteristic

In reality, it is difficult to anticipate future appropriations, as people's behaviours are both infinite and unpredictable. However, an attempt to question the consequences of different spatial configurations can be made by considering a spectrum that extends from *proscription* to *prescription* (Curnier 2016). Figure 5.8 illustrates how some design decisions regarding the treatment of the ground, or the conception of urban furniture, can affect recreational

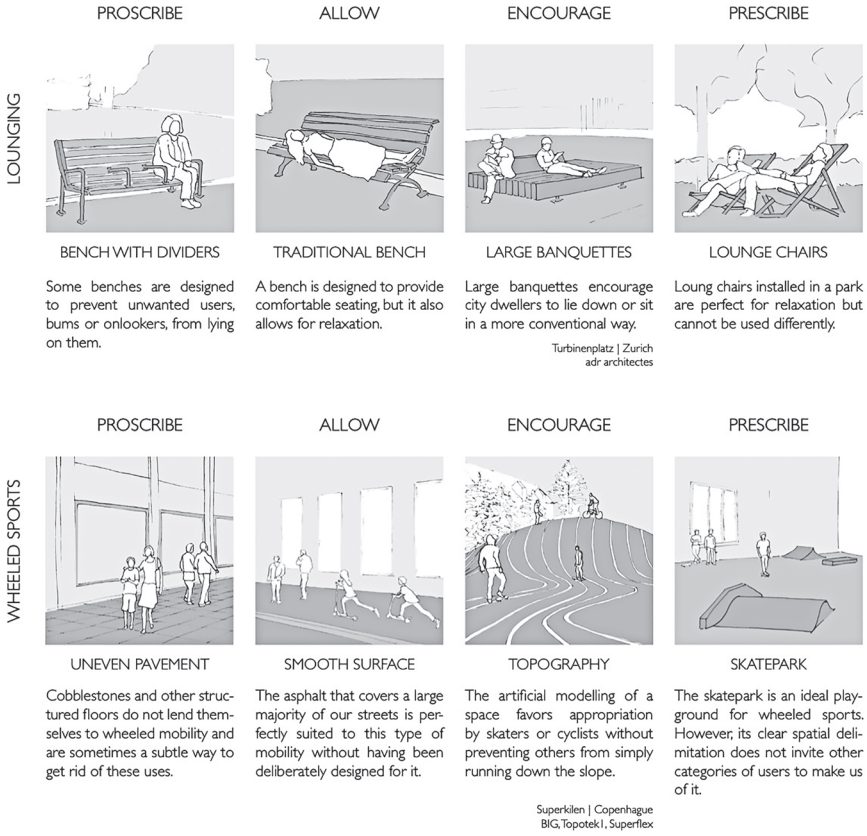


Figure 5.8 Through form and materiality, spatial configurations impact future appropriations. Due to their polyvalent character, some support a wider range of possible uses (originally published in Curnier (2016))

practices, such as lounging or skating. The most restrictive designs, which tend to *proscribe* uses, are conceived deliberately (or not) to prevent unwanted practices. Other spaces or features, designed primarily for necessary uses, nevertheless *allow* users to appropriate or divert them in other ways than they were planned for. Then, a third kind of interventions openly *encourage* some recreational practices. Finally, certain spatial configurations specifically *prescribe* a specific recreational use, through a dedicated design.

This spectrum can serve as a compass to orientate design decisions. It shows how specific designs lend themselves better to a plurality of practices. The two extremes, *prescribing* and *proscribing*, both consist of freezing and delimiting uses. Indeed, the prescription of a use, however playful and unconventional

it may be, evacuates any notion of latitude as to other practices that might arise in the same way as proscription. Conversely, by virtue of the polyvalence they present, the arrangements that could be categorised as *allowing* and, even more obviously, *encouraging*, give a more active role to users, leaving room for a wider range of possible appropriations. Due to their polyvalent character, they open up possibilities for uses without necessarily imposing them.

The author will get back to this notion of polyvalence, but it seems necessary to pause briefly here, and reflect a little further on the use of this spectrum as a design compass. Indeed, it should be noted that while some spatial configurations can be polyvalent for a specific group of users, they can also impede the use of others. For instance, large banks suitable for socialising and lounging are difficult for elderly people to use as they might struggle to get up without support, such as an armrest. The same goes for intriguing building entrances including stairs. They offer potential for rich bodily and social experiences, but need to include an alternative ramp for people with limited mobility for whom a flight of stairs represents a real obstacle. So, the right question would be to ask, what does this design decision allow for, but also how inclusive is it? Indeed, if reinforcing children's perspective through playful designs is a growing and laudable tendency, it should not be done at the expense of other groups of people. If not at the risk of denying the very meaning of true democratic public space. This reminds us that even when consciously designed with children in mind, the journey to school – and cities more generally – needs to remain 'inclusive' and 'open to all' picking up on Oldenburg's definition of the third place (1989/1999, 24).

Equivocal designs as supports of true play and learning

The spectrum described above has been the occasion to explore how polyvalent spatial configurations give a more active role to users, due to the ambiguity as to how they are intended to be used. They leave room for a large degree of freedom, improvisation and interpretation, which in the end are all basic forms of autonomous and informal learning. This room relates to what Caillois, famous theoretician of play, calls 'latitude' (Caillois 1967, 39–40). By this notion, the author makes us aware that to be enjoyable, any form of play requires a certain margin of manoeuvre. In other words, the need to invent and create is inherent to the character of play – and of learning.

While transferring this idea to design matters, one can observe that some spatial configurations open up for a great latitude of creative interpretations, leaving not only polyvalence but also doubt about their function. Several authors have reflected on this ambiguous role of design elements qualifying them respectively as 'non-prescriptive' 'partially defined' or 'undesignated'

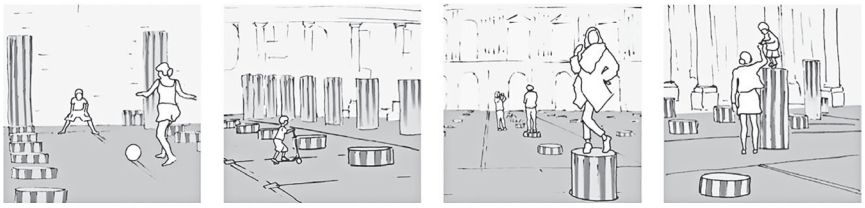


Figure 5.9 Equivocal designs invite for creative reinterpretations. *Les Deux Plateaux* installation by Daniel Buren in the courtyard of the Palais-Royal in Paris (originally published in Curnier (2015))

(Gill 2021, 144; Hertzberger 2008, 228). Drawing on the work of sociologist Breviglieri (2013, 2015), Curnier refers to them as 'equivocal' because this term even further reveals the semantic scope of design features (2015). An equivocal artefact, such as depicted in Figure 5.9, will allow for various forms of creative reinterpretations. Since the creation in 1986 of the art installation *Les Deux Plateaux* at the Palais-Royal in Paris, visitors have used their imagination to reinterpret Daniel Buren's intervention in various playful ways. The columns of different heights set in the courtyard do not preconise any behaviour, although the artist certainly had in mind some of the recreational uses it might spark.

Over the recent decades, a general rise of interest for the theme of playfulness has led to the creation of public spaces focusing on supporting recreational practices in Western cities (Stevens 2007). However, many of these attempts end up *prescribing* certain playful uses, as described above, while leaving little room for interpretation and uncertainty (Curnier 2015). Planned playfulness, and the all-too-common unequivocal design that results from it, bears the risk of creating a biased sense of autonomy and possibility to act upon their environment (Breviglieri 2013). On the contrary, equivocal designs offer a higher level of creative potential and uncertainty, and thus of autonomous and informal learning.

A need for ordinary urban environments

This equivocal nature of public space designs also calls for the banal, the ordinary, to be reinterpreted. Daily functional elements such as a stone primarily serving as a bollard can double up as a seating opportunity for a tired child needing a break, an informal meeting place or an artefact to climb on. The potential of the ordinary to be creatively appropriated refers to yet another characteristic of the third place defined by Oldenburg, that of

'a place with a low profile'. The urban sociologist particularly insists on the importance of third places being 'typically plain', 'unimpressive looking' and 'not elegant' (1989/1999, 36).

Relating to Oldenburg's concern for *plainness*, it is important to note that reaffirming children's place in cities does not necessarily call for playful designs and a "ludic aesthetic" (Moutiez 2020), in a staged way, which tends to turn the urban landscapes into theme parks. This is all too often a reflex on the part of practitioners and public authorities commissioning their work. Should cities be considered as playful environments, they do not necessarily need to look like a sequence of playgrounds. On the contrary, as explained above, when an urban environment or feature is specifically designed for play – or learning – it often bears the risk to offer a limited potential of appropriations, as its use is both planned and expected.

Staged playful designs often overlook children's ability to turn ordinary city spaces into recreational and learning environments, through their imagination and creativity. Yet free play, independent learning and the capacity of children to act upon the world and interpret it are key to developing their autonomy and personality. Exploring the ordinary is also an opportunity to confront oneself with alterity in everyday life situations, which is one of cities' main purposes. Therefore, children need to be provided with urban environments that empower them and support their internal and carefree instincts for playing, learning and growing, 'as an ordinary part of daily routine' to quote Oldenburg one last time (1989/1999, 37). This ordinary can nevertheless take on sensitive, ergonomic and evocative dimensions, awakening the creative spirit and enchantment of city-dwellers, and children in the first place. That is where the know-how of talented and considerate designers comes into place.

Conclusion

Inspired by Oldenburg's concept of the third place, this chapter has been an opportunity to reflect on the impact of design decisions on shaping the way to school. Guided by the idea of *learning on the way*, the author has suggested that the way to school in urban areas plays three main functions in terms of child development – bodily experience, socialising with peers and growing into engaged citizens. This chapter stands as an invitation for all stakeholders – but spatial designers in particular – to reflect upon the impact of design decisions on these learnings. It draws on the idea that the journey to school might become even more valuable when featuring polyvalent, equivocal and ordinary urban environments.

Acknowledgements

This chapter was developed during a mobility fellowship at the Department of Landscape Architecture, Planning and Management, Swedish University of Agricultural Sciences (SLU), as a postdoctoral researcher (2020–2021, Swiss National Science Foundation Early Postdoc.Mobility fellowship). Apart from the rich exchanges I had during this period with my landscape colleagues, I would also like to thank Marcos Weil and Daniel Curnier for their valuable critiques of this text and the references they shared with me.

References

Arup. *Cities Alive: Designing for Urban Childhoods*. London: Arup. 2017.

Breviglieri, Marc. 'Une brèche critique dans la "ville garantie"? Espaces intercalaires et architectures d'usage', in *De la différence urbaine. Le quartier des Grottes/Genève*, edited by Elena Cogato Lanza, Luca Pattaroni, Misha Piraud and Barbara Tirone, 213–36. Geneva: MētisPresses, 2013.

Breviglieri, Marc. 'L'enfant des villes. Considérations sur la place du jeu et la créativité de l'architecte face à l'émergence de la ville garantie'. *Ambiances* (20 April 2015). https://doi.org/10.4000/ambiances.509.

Caillois, Roger. *Les Jeux et les Hommes*. Paris: Gallimard, 1967 (1st ed. 1958).

Camponovo, Sara. 'Les enfants sur le chemin de l'école: tiers-lieu et agency'. *Revue des sciences sociales* 63 (June 2020): 120–27. https://doi.org/10.4000/revss.5232.

Camponovo, Sara and Zoe Moody. 'Le chemin de l'école: un tiers-lieu vecteur d'apprentissages pour les enfants?'. *Revue suisse des sciences de l'éducation (SSRE)* 43, no. 2 (August 2021): 311–24. https://doi.org/10.25656/01:23130.

Codej, Comité pour le développement des espaces de jeu, *Jeu et habitat, 'aménagement urbain'*, Paris: Ministère de l'Equipement, Directeion de l'aménagement foncier et de l'urbanisme, Groupe d'études et de recherche, 1976.

Canciovici, Cristina. 'The plinth: a portal to play', in *The City at Eye Level for Kids*, edited by Rosa Danenberg, Vivian Doumpa and Hans Karssenberg, 148–51. Rotterdam, Amsterdam: Stipo Publishing, 2018.

Chawla, Louise. 'Benefits of Nature Contact for Children.' *Journal of Planning Literature* 30 (July 2015): 433–52. https://doi.org/10.1177/0885412215595441.

Churchman, Arza. 'Is There a Place for Children in the City?' *Journal of Urban Design* 8, no 2 (June 2003): 99–111. https://doi.org/10.1080/13574800306482.

Curnier, Sonia. Translated by Oliver Waine, 'Programming play into public space?' *Metropolitics* (20 March 2015). http://www.metropolitiques.eu/Programming-play-into-public-space.html.

Curnier, Sonia. 'Proscrire ou prescrire ? Choix de conception et appropriations de l'espace public', in *Espace Public, Espace Politique*, edited by Marine Gresser (dir.), 48–51. Bordeaux: Éditions BAOBAB Dealer d'espaces, 2016.

Curnier, Sonia. *Espace public comme objet per se? Une analyse critique de la conception contemporaine.* Lausanne: EPFL, Thesis n 8495, 2018.

Curnier, Sonia. 'Spaces', in *Second Glance/Landscape Architecture Europe #6*, edited by Lisa Diedrich, 103–67. Wageningen: Blauwdruk, 2022.

Danenberg, Rosa. 'Introduction', in *The City at Eye Level for Kids*, edited by Rosa Danenberg, Vivian Doumpa and Hans Karssenberg, 18–24. Rotterdam, Amsterdam: Stipo Publishing, 2018a.

Danenberg, Rosa. 'Plinths for children', in *The City at Eye Level for Kids*, edited by Rosa Danenberg, Vivian Doumpa and Hans Karssenberg, 98–102. Rotterdam, Amsterdam: Stipo Publishing, 2018b.

Danenberg, Rosa, Vivian Doumpa and Hans Karssenberg (ed.). *The City at Eye Level for Kids*, Rotterdam, Amsterdam: Stipo Publishing, 2018.

Dolley, Joanne and Caryl Bosman. *Rethinking Third Places. Informal Public Spaces and Community Building*. Cheltenham: Edward Elgar Publishing, 2019.

European Commission. *Kids on the Move*. Luxembourg: Office for Official Publications of the European Communities, 2002.

Fotel, Trine and Thyra Uth Thomsen, 'The Surveillance of Children's Mobility'. *Surveillance & Society* 1, no. 1 (January 2003): 535–54. https://doi.org/10.24908/ss.v1i4.3335.

Gehl, Jan. *Life between Buildings*. Washington, DC: Island Press, 2011.

Gehl, Jan. *Cities for People*. Washington, DC: Island Press, 2010.

Gill, Tim. *Urban Playground: How Child-Friendly Planning and Design Can Save Cities*. London: Riba Publishing, 2021.

Granié, Marie-Axelle and Clément Rivière. 'Enfant', in *Dictionnaire pluriel de la marche en ville*, edited by Kaduna-Eve Demailly, Jérôme Monnet, Julie Scapino and Sophie Deraëve, 115–18. Paris: L'œil d'or, 2021.

Granié, Marie-Axelle and Juan Torres. 'Autonomie, Indépendance', in *Dictionnaire pluriel de la marche en ville*, edited by Kaduna-Eve Demailly, Jérôme Monnet, Julie Scapino and Sophie Deraëve, 44–48. Paris: L'œil d'or, 2021.

Hertzberger, Herman. *Space and Learning: Lessons in Architecture 3*. Rotterdam: 010 Publishers, 2008.

Hillman Mayer, John Adams and John Whitelegg. *One False Move: A Study of Children's Independent Mobility*. London: Policy Studies Institute, 1990.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York, NY: Vintage Books, 1961.

Johansson, Maria, Fredrika Mårtensson, Märit Jansson and Catharina Sternudd. 'Chapter Twelve – Urban Space for Children on the Move', in *Transport and Children's Wellbeing*, edited by Owen Waygood, Margareta Friman, Lars Olsson and Raktim Mitra, 217–35. Amsterdam, Oxford, Cambridge: Elsevier, 2020.

Karssenberg, Hans. '36 Lessons for a Better City at Eye Level for Kids', in *The City at Eye Level for Kids*, edited by Rosa Danenberg, Vivian Doumpa and Hans Karssenberg, 344–65. Rotterdam, Amsterdam: Stipo Publishing, 2018.

Kellert, Stephen R. 'Experiencing Nature: Affective, Cognitive, and Evaluative Development in Children', in *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations*, edited by Peter H. Kahn, Jr. and Stephen R. Kellert, 117–51. London: MIT Press, 2002.

Krysiak, Natalia. *Designing Child-Friendly High Density Neighbourhoods. Transforming Our Cities for the Health, Wellbeing and Happiness of Children*. Sydney: Cities for Play, 2020.

Krysiak, Natalia. *Where Do Children Play: Designing Child-Friendly Compact Cities*. Sydney: Australian Institute of Architects, 2018.

Kyttä, Marketta. *Children in Outdoor Contexts: Affordances and Independent Mobility in the Assessment of Environmental Child Friendliness*. Dissertation. Helsingfors: Helsinki University of Technology, 2003.

Lefebvre, Henri. *La Production de l'espace*. Paris: Editions Anthropos, 1974.

Lefebvre, Matthias and Anael Maulay, Agence Espace Libre. 'Se prendre au jeu', *Openfield* no. 4 (November 2014). https://www.revue-openfield.net/2014/11/29/se-prendre-au-jeu/.

Lewis, Paul and Juan Torres. 'Les parents et les déplacements entre la maison et l'école primaire: quelle place pour l'enfant dans la ville?'. *Enfances, Familles, Générations*, no. 12 (Spring 2010): 44–64. https://doi.org/10.7202/044392ar.

Lingwood, Jamis, Mark Blades, Emily K. Farran, Yannick Courbois and Danielle Matthews. 'The Development of Wayfinding Abilities in Children: Learning Routes with and without Landmarks'. *Journal of Environmental Psychology*, no. 41 (March 2015): 74–80. https://doi.org/10.1016/j.jenvp.2014.11.008.

Louv, Richard, *The Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder*. Chapel Hill: Algonquin Books, 2005.

Madden, Kathleen. *How to Turn a Place Around: A Placemaking Handbook*. New York: Project for Public Space, 2021.

Masboungi, Ariella. 'Rez-de-chaussons les villes.' in *(Ré)aménager les rez-de-chaussée de la ville*, edited by Ariella Masboungi, 8–15. Paris: Editions Le Moniteur, 2013.

McMillan, Tracy E. 'Urban Form and a Child's Trip to School: The Current Literature and a Framework for Future Research'. *Journal of Planning Literature* 19, no. 4 (May 2005): 440–56. https://doi.org/10.1177/0885412204274173.

Mehta, Vikas and Jennifer Bosson. 'Third Places and the Social Life of Streets'. *Environment and Behavior* 42, no. 6 (November 2010): 779–805. https://doi.org/10.1177/0013916509344677

Moreno, Carlos. *Droit de cité. De la 'ville-monde' à la 'ville du quart d'heure'*. Paris: Editions de l'Observatoire, 2020.

Motmans Roeland and E. Ceriez. *DINBelg 2005*. Leuven: Ergonomie RC, 2005. www.dinbelg.be.

Moutiez, Julia. *Du jeu, modèle pour étudier les sociétés humaines au jeu, outil de gestion, de conception et de médiation*. ENSA-Marseille: SUD volumes critiques, 2020. Hal-03103729.

Noschis, Kaj. 'La ville, un terrain de jeu pour l'enfant'. *Enfances & Psy*, no. 33 (2006/4): 37–47. https://doi.org/10.3917/ep.033.0037.

Noschis, Kaj. 'Child Development Theory and Planning for Neighbourhood Play', *Children's Environments* 9, no. 2 (1992): 3–9.

O'Brien, Margaret, Deborah Jones, David Sloan and Michael Rustin. 'Children's Independent Spatial Mobility in the Urban Public Realm'. *Childhood* (Copenhagen, Denmark) 7, no. 3 (August 2000): 257–77. https://doi.org/10.1177/0907568200007003002.

Oldenburg, Ray. *The Great Good Place: Cafés, Coffee Shops, Community Centers, Beauty Parlors, General Stores, Bars, Hangouts, and How They Get You through the Day* (3rd ed.). Cambridge: Da Capo Press, 1999.

Prezza, Miretta, Francesca Romana Alparone, Carmela Cristallo and Luigi Secchiano. 'Parental Perception of Social Risk and of Positive Potentiality of Outsdoor Autonomy for Children: The Development of Two Instruments'. *Journal of Environmental Psychology*, 25, no. 4 (December 2005): 437–53. https://doi.org/10.1016/j.jenvp.2005.12.002.

Prezza, Miretta, Stefania Pilloni, Carmela Morabito, Cinzia Sersante, Francesca Romana Alparone and Maria Vittoria Giuliani. 'The Influence of Psychological and Environmental Factors on Children's Independent Mobility and Relationship to Peer Frequentation'. *Journal of Community and Applied Psychology* 11, no. 6 (November/December 2001): 435–50. https://doi.org/10.1002/casp.643.

Pyle, Robert Michael. 'Eden in a vacant lot: special places, species, and kids in the neighborhood of life', in *Children and Nature: Psychological, Sociocultural, and Evolutionary Investigations*, edited by Peter H. Kahn, Jr and Stephen R. Kellert, 305–27. London: MIT Press, 2002.

Racine, Jean-Bernard. 'La ville et ses visages: Pour un autre regard sur l'enfant dans la ville', in *L'espace vital de l'enfant ou la ville et l'enfant*, edited by Monique Skrivan. Lausanne: Comportements, 1999.

Rivière, Clément. '"Les temps ont changé". Le déclin de la présence ces enfants dans les espaces publics au prisme des souvenirs des parents d'aujourd'hui'. *Les Annales de la Recherche Urbaine*, no. 111 (2016): 6−17. https://doi.org/10.3406/aru.2016.3219.

Rissotto, Antonella and Francesco Tonucci. 'Freedom of Movement and Environmental Knowledge in Elementary School Children'. *Journal of Environmental Psychology* 22, nos. 1–2 (March 2002): 65–77. https://doi.org/10.1006/jevp.2002.0243.

Ross, Nicola J. '"My Journey to School…": Foregrounding the Meaning of School Journeys and Children's Engagements and Interactions in Their Everyday Localities'. *Children's Geographies* 5, no. 4 (November 2007): 373–91. https://doi.org/10.1080/14733280701631833.

Sim, David. *Soft City: Building Density for Everyday Life*. Washington, DC: Island Press, 2019.

Shaw, Ben, B. Fagan-Watson, Bjorn Frauendienst, Andreas Redecker, Tim Jones and Mayer Hillman. 'Children's Independent Mobility: A Comparative Study in England and Germany (1971–2010)'. London: Policy Studies Institute, 2013.

Skår, Margrete and Erling Krogh. 'Changes in Children's Nature-Based Experiences Near Home: From Spontaneous Play to Adult-Controlled, Planned and Organized Activities'. *Children's Geographies* 7, no. 3 (August 2009): 339−54. https://doi.org/10.1080/14733280903024506.

Stevens, Quentin. *The Ludic City: Exploring the Potential of Public Spaces*. London: Routledge, 2007.

Tonucci, Francesco. *La ville des enfants Pour une [r]évolution urbaine*. Marseilles: Parenthèse, 2019.

UNICEF. *The State of the Worlds Children 2012: Children in an Urban World*. New York: UNICEF, 2012.

UNICEF. *Child Deaths by Injury in Rich Nations*. New York: UNICEF, 2001.

Villanueva, Karen, Hannah Badland, Amanda Kvalsvig, Meredith O'Connor, Hayley Christian, Geoffrey Woolcock, Billie Giles-Corti and Sharon Goldfeld. 'Can the Neighbourhood Built Environment Make a Difference in Children's Development? Building the Research Agenda to Create Evidence for Place-Based Children's Policy'. *Academic Pediatrics* 16, no. 1 (January–February 2016): 10–19. https://doi.org/10.1016/j.acap.2015.09.006.

Ward, Colin. *The Child in the City*. London: Bedford Square Press, 1990 (2nd ed.).

Woolcock, Geoff. 'Child-friendly third places', in *Rethinking Third Places. Informal Public Spaces and Community Building*, edited by Joanne Dolley and Bosman Caryl, 56–72. Cheltenham: Edward Elgar Publishing, 2019.

Zdiara, Anna. 'The City as Playground, Museum, Cinema & Classroom', in *The City at Eye Level for Kids*, edited by Rosa Danenberg, Vivian Doumpa and Hans Karssenberg, 139–42. Rotterdam, Amsterdam: Stipo Publishing, 2018.

Part II

CHILDREN'S EXPERIENCES OF THE SCHOOL JOURNEY

Chapter 6

CHILDREN'S EXPERIENCES AND AFFECTIVE CONNECTIONS WITH PLACE IN THEIR INDEPENDENT MOBILITY

Penelope Carroll and Karen Witten
SHORE & Whāriki Research Centre, Massey University

Introduction

When children's well-being is compromised by their urban environments, the social sustainability of our cities is in question. Neighbourhoods are the fundamental unit of everyday experience for most children outside of home and school, offering varying opportunities for safe independent mobility, outdoor play and social interaction (Carroll et al. 2015). They not only determine the routines of everyday life but also strongly influence children's physical, social and cognitive development and well-being (Lalli 1992; Min and Lee 2006; Tranter and Pawson 2001). Children learn through playful interaction with their surroundings and experiences of place contribute to child development (Moore 1986; Waygood et al. 2017). Play has often been called 'the work of childhood' (Piaget 1982).

Being out and about and playing in the public domain, once considered 'a rite of passage of childhood' (Alexander et al. 2014), has decreased in Aotearoa/New Zealand (NZ) as elsewhere (Carroll et al. 2015; Egli et al. 2020). So has that other childhood 'rite of passage', walking to and from school (Ministry of Transport 2009; Shaw et al. 2015). As walking to and from school affords many occasions for play and socialising along the way (Smith et al. 2020), these opportunities have diminished with its decline – including socialising with shop owners and other adults in the community (Carroll et al. 2015; Waygood and Friman 2015; Wood et al. 2010).

Cities are largely designed for adults and motor vehicles, not for children; 'child blind' urban planning (Gleeson and Sipe 2006) and safety discourses combine to limit children's presence and play outside of home, school and

child-designated destinations such as sportsgrounds, playgrounds and skateparks (Freeman and Tranter 2011; Randolph 2006; Woolley 2017). Indeed, children are rendered largely out of place in other public space, even though a city's streets, alleyways, footpaths and verges – the places between destinations – remain important for everyday play and independent mobility. Formerly sites for play, city streets have been essentially transformed into 'adult-only' spaces (Karsten 2005). However, for some children at least, 'the street' still trumps backyards, sportsgrounds, parks and playgrounds as preferred outdoor space for play and hanging out with friends (Thomson and Philo 2004).

This chapter draws on children's accounts of moving around and playing in diverse neighbourhoods across Tāmaki Makaurau/Auckland – suburban and urban/inner city – from our *Kids in the City* study, as we investigated the roles played by the physical attributes and social networks embedded in neighbourhood *third places* in children's neighbourhood experiences and sense of belonging and place. 'Independent mobility' is defined as travel alone or with peers without adult supervision. In terms of play, the focus is on free or informal play. Such play is unsupervised or controlled by adults, an end in itself, something fun and pleasurable (Alexander et al. 2014).

The chapter is structured as follows: In the Background section, a brief examination of factors that limit children's independent mobility in the public realm is conducted. Next, the *third place* framework used as a lens to investigate children's independent mobility in Tāmaki Makaurau/Auckland in our *Kids in the City* study is outlined. Children's experiences of play and independent mobility in the *third places* of the city – both on the journey to school and more widely in their neighbourhoods – and the affective connections with place engendered through their independent mobility are then presented. Attention is given to children's accounts of affordances (Kyttä 2004) provided by a combination of the characteristics of their neighbourhood *third places*, their own imaginings and their independent mobility. Two contrasting vignettes illustrate the diversity of perceptions and experiences. Finally, a brief look at what children in the study thought made a good neighbourhood is given, as well as a reflection on the playful potential inherent in the public realm.

Background

Adult-supervised formal leisure activities for children are in many instances replacing informal play and 'hanging out' in Tāmaki Makaurau/Auckland as elsewhere – at least for children from higher socio-economic backgrounds (Carroll et al. 2015; Freeman and Tranter 2011; Kearns and Collins 2006). However, the street and other public spaces remain important play spaces for children of all backgrounds, and potentially more so for children in households unable to pay for formal leisure activities (Elsley 2004).

The role of parental fear and societal safety discourses in declining independent mobility and outdoor play is clear (Fyhri et al. 2011; Karsten 2005; Mackett et al. 2007). A 2015 survey of more than 2000 Tāmaki Makaurau/Auckland parents showed that, while almost all (91.5%) believed roaming independently in the neighbourhood was good for children (because it helped them find their way around and allowed them to meet and play with other children), less than half believed children under 13 years should be out and about alone without adult supervision (or under 11 years, if with friends) – because of fears for their safety (Duncan and McPhee 2015). A later survey of 2,675 parents showed that although 40% wanted their children to be able to play in *third spaces* (such as a park or the street) close to home, only 23% allowed this, again because of safety fears (Auckland Council 2017). Here, tension is evident between safety and risk discourses; between parents' fears for their children's safety, which limit children's independent mobility, and a belief that being independently out and about is important for children's cognitive and social development (Cordovil et al. 2015; Lin et al. 2017).

When children are asked what would make their city a good place to live, having spaces to play and socialise with friends are universal responses (Carroll et al. 2015; Chawla 2002; O'Brien 2003). This has been the case whether children were pre-teen or teenagers (Matthews et al. 2000; Thomson and Philo 2004). Not only are welcoming and safe spaces in cities where children can play, explore or simply hang out scarce; in addition, children are increasingly supervised and surveilled (Furedi 1997; Prout 2000) and their freedom of movement restricted by design, decree and safety concerns (Carroll et al. 2015; Carver et al. 2008; Freeman and Tranter 2011; Karsten 2005). Gleeson and Sipe (2006) write of toxic cities that not only fail to nurture children, but threaten to physically and mentally harm them.

Research from a range of academic fields (public and paediatric health, children's geographies, education, psychology, disability studies, mobilities, etc.) emphasises the importance for children's learning, development and well-being of both access to the public realm and free play (as opposed to play activities controlled by adults) (Alexander et al. 2012; Christensen 2003; Gray 2011). When out and about independently and playing in the public realm, children learn to solve problems, overcome fears and take control of their own lives, and their independence, resilience and social competence are enhanced (Waygood et al. 2017). Being out and about independently in *third places* not only affords opportunities to socialise with friends and encounter other community members (Alparone and Pacilli 2012; Valentine 2004; Waygood and Friman 2015), it is also important to promote a sense of belonging and 'place attachment' (Proshansky and Gottlieb 1989; Woolley et al. 1999).

Place attachment is in turn central to personal identity as children's affective connections with their neighbourhood environments become part of their personal identity (Woolley et al. 1999).

Children are under-represented in the use of urban space; they are losing out in the spatial justice stakes (Soja 2010). Yet like adults, children are citizens, and as such, have a 'right' to the city (Lefebvre 1968; United Nations 2017). Under the 1989 UN Convention on the Rights of the Child (United Nations 1989), they also have the right to play.

Third Place Framework

Third places are theorised as anchors of community well-being, facilitating social connection and enabling a sense of place and belonging (Gardner 2011; Oldenburg 2001). These accessible public spaces are separate from the more defined and confined physical and social environments of the *first place* of home and the *second place* of work/school. It is in the *third places* of the public realm that children have the potential to learn social skills and competencies (Lennard and Crowhurst Lennard 1992) through their independent mobility and play. *Third places* can be divided into *destination*, *threshold* and *transitory* spaces (Gardner 2011). *Destinations* include outdoor places such as parks, sportsgrounds, playgrounds and skateparks. *Thresholds* are semi-public *third places* straddling the *first place* of home and the wider neighbourhood and include courtyards, driveways, apartment foyers and carparks. *Transitory zones* – the 'places between places – on the way to someplace' (Gardner 2011, 269) – include thoroughfares such as roads, footpaths and walkways, and features encountered en route like grass verges, steps and walls. Depending on the physical and social characteristics of *third places*, they can either facilitate or constrain children's independent mobility, play, social interaction and exploration.

Children's presence and play in *threshold* and *transitory third places* in particular challenge adult hegemony of the city, injecting a playful presence as they set about transforming and repurposing physical features of these places for play. The surfaces of footpaths and pavements become sites for ball games, riding bikes and scooters (non-motorised), rollerblading and skateboarding. A particularly smooth-surfaced pavement or road is valued for rollerblading; a kerb or irregularity in the pavement is good for doing 'tricks' on scooters and skateboards. These usages challenge the primary purpose of roads and pavements as efficient thoroughfares for pedestrian, motor vehicles and other through traffic. Almost anywhere and anything is seen as an opportunity for play and to hang out with friends (Carroll et al. 2019).

The Study

Tāmaki Makaurau/Auckland, Aotearoa/New Zealand's (NZ) largest and fastest-growing city, is the location of our study. The city's population of 1.7 million is projected to grow to two million by early next decade and planning strategies to create a more compact, sustainable city through residential intensification are beginning to reverse a 70-year trend of urban sprawl. While standalone suburban houses with backyards are still the norm for families with children, an increasing number are living in apartments. It is projected the larger part of Auckland's future population will live in higher density housing. This has implications for children's outdoor play opportunities and independent mobility as traditional backyards progressively disappear and traffic volumes increase. Ensuring children can safely access the *third places* of the public realm is becoming ever-more imperative.

Kids in the City (*KITC*) explored children's experiences and perceptions of their neighbourhoods and relationships between neighbourhood urban design attributes, safety perceptions (their own and their parents') and children's independent mobility and physical activities (including play). The researchers worked with 265 children (8–13 years) from nine schools in neighbourhoods (six suburban and three urban/inner city) with varying socio-economic and urban design characteristics. Travel diaries, Geographic Positioning System (GPS) units and accelerometers measured where children went, who with and how (transport mode) and their physical activity levels over seven days. At home and 'go-along' walking interviews with children explored their neighbourhood experiences, perceptions and affective connections with place; follow-up school-based focus groups delved more deeply into their neighbourhood perceptions, their independent mobility and play. Parents were also interviewed by phone and some took part in follow-up school-based focus groups. Data were collected in 2011–2012 (see Oliver et al. (2011) for details of methods). In analysing children's qualitative data, a phenomenological approach was taken (Skår and Krogh 2009) to uncover interactions between children and affordances in their neighbourhood environments and to understand the facilitators and barriers to their independent mobility and play.

This chapter draws on data from at-home and neighbourhood walking interviews, school-based focus groups and children's travel diaries recording their trips (independent and otherwise) over a seven-day period (Table 6.1) to explore children's independent mobility, play and affective connections with place. The neighbourhood walking interviews, during which children took the researchers to places they liked to go (and places they were normally not allowed to go) and photographed neighbourhood features of particular significance to them, were particularly revealing. Table 6.1 confirms the journey

Table 6.1 Mean number of trips (accompanied and independent) per child per week by trip purpose

Trip purpose	Inner city (mid/higher SES neighbourhood) *N* = 93	Suburban (mid SES neighbourhood) *N* = 55	Suburban (low SES neighbourhood) *N* = 105
School	5.11 *(*38.4%*)	5.11 (*24.8%*)	4.97 (*48.7%*)
Shops	2.76 (*18.5%*)	3.02 (*7.9%*)	4.75 (*29.3%*)
Formal physical activity	2.09 (*16.3%*)	0.96 (*13.5%*)	0.56 (*23.2%*)
Informal physical activity	1.09 (*41.3%*)	0.84 (*28.6%*)	2 (*65%*)
Social family	1.8 (*31.1%*)	1.42 (*2.8%*)	2.29 (*19.2%*)
Social friends	1.64 (*46.3%*)	1.02 (*37.2%*)	1.39 (*78.4%*)

*Italicised figures are the percentage of trips taken independently (without adult supervision); SES indicates socio-economic status of the school population/neighbourhood.

to school was the most frequent trip children made across all socio-economic groupings, followed by trips to shops.

Trips to engage in formal (such as sport) and informal (such as play) physical activities were the next most frequent trips children made, with those from lower socio-economic neighbourhoods less likely to be involved in formal extracurricular leisure and sporting activities than children from higher socio-economic neighbourhoods. This supports Elsley's (2004) contention that the street remains an important play space for children from lower socio-economic neighbourhoods.

Diversity

A striking feature of children's accounts of their independent mobility and play was the diversity of their lives within and across neighbourhoods. Some children never left home without a parent or other adult. Variations on 'I'm not allowed anywhere without my parents' were not uncommon. Conversely, a small number of children roamed confidently and widely around their neighbourhoods unsupervised. Parents were the gatekeepers of their children's independent mobility and outdoor play, with older children, not surprisingly, having more parental license to freedom than younger children. However, parental fears of traffic and perceptions of so-called stranger danger limited

children's independent mobility in the public realm across all ages, and many children echoed their parents' fears.

The next section explores children's independent mobility and play in the different spaces of the city using a *third place* framework. Their accounts of play in the *first* and *second* places of home and school are first presented, then their presence in the *third places* of the city, which they appropriated and at times 'repurposed' with their playful imaginings, is considered. During the walking interviews, many children spoke of the frequency of their independent trips to the nearby homes of friends and relatives (confirmed by trip diaries), leading the researchers to theorise 'friends' houses' as a *fourth place* (Carroll et al. 2015). However, this chapter is confined to the established framework of *first*, *second* and *third places*. As transitory places were the most salient of *third places* in the journey to school, these will be foregrounded.

First place of home and play

Home and adjacent third place thresholds (backyards, courtyards, driveways and apartment foyers and corridors) were favourite places to play. While children spoke of playing inside, those living in standalone houses in the suburbs often had extensive backyards where they shot hoops, played bull rush, tiggy and ball games with siblings and friends, climbed trees and bounced on trampolines. Driveways provided smooth surfaces for bike riding, scooters and skateboards. For children living in inner-city apartments, parking areas and adjacent carparks were co-opted for outdoor play, while indoors they repurposed foyers, corridors, stairs and service areas under stairwells as places for play. They described playing soccer in corridors, tiggy on the stairs, and ball games in and under stairwells. The space under one particular stairwell was popular for circling a hula hoop: 'Under the stairs there is a big space [where] sometimes we play with a ball and sometimes with a hula hoop' (Girl, 10 years).

Such playful appropriations did not always go uncontested. An example was the 'PLEASE DO NOT PLAY IN COMMON AREA' sign that suddenly appeared on all floors of an inner-city high-rise apartment block where one participant was living: 'We used to play hide and seek and tag in the corridor but then the manager had calls complaining about the noise… Now there are signs on each floor telling us we can't play there' (Girl, 12 years).

While such signs discouraged children's play for a while, they did not stop it.

Second place of school and play

School was a primary site for children's play and social interaction. Children spoke of school being 'good' and 'fun' and 'cool', and of hanging out there

with friends, of playground games and imaginings. Where school grounds were open outside school hours (not all were), these were favoured destinations for some to play (alone and with siblings and friends) after school, at weekends and during school holidays. Parents often considered school grounds 'safe' places for their children to play. Several *KITC* participants took the researchers to their schools on walking interviews to show their favourite play *destination*; a few children (whose schools were officially closed for play outside of school hours) took them to see the holes in the school hedge/fence they and their friends climbed through to play – despite official school closure.

The School Journey

As noted above, the journey to school, an important part of everyday life for children, was the most frequent trip recorded in travel diaries. It thus provided children with the most opportunity for independent mobility and play in *transitory third places*. While 38% of the *KITC* children were driven to school (and 30% home) in a private motor vehicle, 52% walked to school and 60% home; 4% scootered, 5% took a bus (included some active travel) and one child cycled (both ways). The higher percentage of children driven to school than home (8% higher) was largely the result of trip chaining, as parents dropped children at school on their way to work.

While some children using an active transport mode (walking, scootering, biking, skateboarding) were supervised, most were independently out and about in the *transitory third places* between home and school. It is clear from children's accounts that the school journey was not just about getting between two destinations (home and school), but also about connecting with peers and surroundings, enjoyment of active and imaginary play – and for some, provided time for reflection and relaxation ('I like thinking about my day.') in the *transitional third places* between home and school.

Many spoke of talking with friends and games they played on the way to and from school. They ran, spun and skipped; balanced on walls and kerbs; bounced, kicked and passed basketballs, footballs and hand balls; jumped over shadows and avoided cracks. For instance:

> When I walk home [from school] I just do turnarounds. I spin. (Girl, 9 years)
>
> On the way to school there's these shadows and me and my brother used to have this thing we used to jump over, so we wouldn't stick in the shadow. If a car would drive by there would be a shadow on the [footpath], so we had to jump over the shadow. (Boy, 10 years)
>
> And we have another thing where we don't step on a crack. (Boy, 11 years)

Several boys talked of play-fighting as they walked to school.

I kind of play around with my friends […] stuff like play fighting.' (Boy, 11 years)

Being independently mobile on their school journey meant children could also stay and play after school in the school playground ('Sometimes I play [in the] playground before I leave'), or detour to *third place destinations*, such as shops and parks as part of their school journey ('I go to the shops and buy food with my friends'; 'I get to go through the park').

Third place destinations for play and hanging out

Trips to shops were the second most frequent trips recorded in travel diaries and the local dairy (or convenience store) was a favourite third place destination. Many of the children were allowed to go unaccompanied to their local dairy and several spoke of being on friendly terms with the shopkeepers: 'Me and S go there quite a lot. We're quite good friends with them, so, um, sometimes they give us free lollies' (Girl, 11 years).

Bakeries were also favoured destinations, and often part of the journey to school ('the bakery, that's where I get my lunch'). The local mall was a favourite haunt for hanging out. 'It's gangsta' (Boy, 10 years).

The local park was a *third place* destination documented in travel diaries for both formal and informal physical activities: for team sports practice and informal team games, for tiggy, and for *just running around* and climbing trees. Both boys and girls spoke of climbing trees.

Many children's accounts of parks had a strong relational aspect: the park was about play; but it was also about playing with friends. Children might go to the park to play on equipment/kick a ball around/climb a tree and meet up with friends there, or they might set off with friends to play together in the park: 'Sometimes I go with my friend, or my sister and her friends, and like the whole neighbourhood kind of kids. And we might play a giant game of tag or a giant game of soccer or something like that on the field' (Girl, 12 years).

When just with her friend, she said, they played different, more discrete games: 'Sometimes we climb trees and pretend we're monkeys and stuff like that.'

Third place thresholds and play

As noted earlier, semi-private *threshold* places between home and the street offered many play opportunities. While suburban children played ball games, rode bikes and scootered in driveways, children living in inner-city apartments

played various games in foyers, corridors and stairwells. Inner-city children also valued carparks adjacent to low- and medium-rise apartment blocks. They became 'courts' for badminton, tennis and other ball games or spaces for bike-riding, rollerblading and scootering. Sometimes children played in between and around cars, or they waited until the workers or shoppers had gone home, leaving an open space for play. One boy (10 years) described learning to rollerblade in an adjacent carpark, weaving around parked cars, and a girl (11 years) described a car park with a high wall, adjacent to her apartment block as her favourite place to play and hang out with siblings and friends.

Transitory third places and play

Streets were much more than just thoroughfares. Children used curbs for tricks with scooters, skateboards and bikes and played the game of avoiding stepping on cracks; they ran, skipped and spun in circles; they repurposed walls, maintenance hole covers and other street features for their play. Walls, for instance, were no longer for demarcating private property but for climbing on or bouncing balls off. A girl (11 years) spoke of a boundary wall in front of a house she passed on her way to school each day that she always climbed up on, walked along to the end of, then jumped down from because 'it's fun'. For one boy (10 years), any wall was an invitation to climb: 'Ah, I only jump on walls and stuff like that if I'm with my friends and if I want to. Ah, I do it most times.'

Maintenance hole and inspection covers on city pavements were repurposed for playful interaction as children 'walked' to various destinations or hung out together on the street. One boy (12 years) explained the code on a walking interview: FH (fire hydrant) was 'first hit' and WH (water hydrant), 'whack me'; standing on a V (street valve) earned a vampire-like grip around the neck and a T (telephone equipment), a taser-like jab to the kidneys. Several children from the same inner-city school spoke of playing this particular game.

On another walking interview, a 10-year-old boy traversed a small greenspace providing a shortcut between two shopping areas at a busy intersection. In the middle was a sculpture of large rocks, topped with a fountain. Oblivious to the flow of pedestrians, he always clambered on to it. He said: 'I climb up on a rock to see what I can see and sometimes I dance around […] then I climb up on another rock.' His focus was not on getting from A to B, but on the opportunities for fun and play along the way.

Alongside their imaginative 'repurposing' of public space, children also asserted their right to the city through hanging out on streets and in shopping malls, seen primarily as the domain of adults.

> I like looking in the shop windows because they've always got different displays every month […] they've got some cool and quirky shops here.' (Girl, 11 years)
>
> I like looking at the shops and going shopping – and seeing all the people (Girl, 12 years). She also loved: '[…] examining the houses along [some] streets because they are all very posh and flash… it's interesting to imagine what it would be like to live in those sorts of houses'.

Streets provided opportunities to walk and talk with friends and to look at people, shop displays and cafes, houses and gardens, just as they do for adults.

Affective Connections Engendered through Independent Mobility in *Third Places*

When children moved about independently and safely in neighbourhood *third places*, they developed positive affective connections with particular places and features. These included familiar streets they walked on ('I pass that way'; 'my dad always passes that way'), favourite dairies and bakeries ('It's a cool dairy [and] the guys that own the dairy are really nice'; 'I like the smell of the bakery'); parks they played in ('I used to play on that when I was little'; 'You can run wild when you're on the grass'); and trees they climbed.

Among personal histories and routines embedding a sense of place and belonging, trees were often mentioned on walking interviews. Children pointed out particular trees they picked fruit from each season ('There's lots of peach trees around here'; 'We get feijoas off those trees'), and trees that changed colour were remarked on ('I like the fact that in autumn, the leaves … it looks really pretty'). They especially talked about favourite trees they climbed: 'I feel safe in trees for some reason. Even though it's high and I could get badly hurt from falling down, I just feel safe at the top of trees where it's high' (Girl, 11 years).

One girl (12 years) showed the researchers many neighbourhood trees, and as illustrated in the quotes below, talked about the special significance of some of them:

> '[…] this tree [is]where a lot of me and my friends' adventures happened'; 'I climb this tree a lot, like if I'm eating sugar with my friends we climb the tree and chillax in the lower branches'; 'If I'm mad at my mum or anything like that, I can stand in front of these trees […] and I like to sit down in them because I think it's weird how they're in a perfect triangle'; 'When me and my friends were really young and we still believed in fairies, we believed that was a magic fairy area […] [and] even though I don't believe in fairies now I still think it's a magical area.'

Past memories and present experiences were interwoven with and marked by specific trees in her neighbourhood – at school, in the common area surrounding her home and in the nearby park. Other children from the same neighbourhood talked of a 'family tree': 'We have a tree, we call it the family tree and everyone has a spot and we just sit there and talk sometimes … we all have our spots' (Girl, 11 years).

Relationships with friends and family living nearby often entwined with affective connections to familiar aspects of the physical environment (such as trees, local shops, the route to school) to engender a sense of place. This was particularly so when children were allowed to walk and play independently in their neighbourhood.

Returning to earlier comments on the diversity of children's experiences, the two vignettes that follow provide a stark contrast both in levels of independent mobility allowed by parents and the children's ensuing affective engagement with their neighbourhood, their confidence and sense of place. Both participants were boys aged 10 years at the time of the walking interviews, one attending an inner-city and the other a suburban school. Both had mothers and fathers who worked, and both were driven to school. However, while Paolo enjoyed a high level of independent mobility, Jagan was barely allowed to leave his home without parental supervision because they feared for his safety.

Two Vignettes

Paolo, the 10-year-old boy who danced around on the rock sculpture topped with a fountain (see above) during the walking interview, took frequent after-school excursions in the shopping precinct near his inner-city school. Some years previously he had lived close by and knew many of the shop owners. After he jumps down from the sculpture, he stops at the barber's shop and the barber, in the middle of a haircut, greets him, smiling, and asks him how he is. They converse for a minute or two. Paolo is very animated and happy. We then stop at a bar where he says his mother's friend works. She is serving drinks over the counter, which fronts onto the pavement. She sees Paolo and beams at him. He walks around into the bar where she hugs him, and they talk for a few moments. On the way to show us his old home prior to moving to a house in the suburbs, he points out other familiar places – the swimming pool where he learnt to swim, the movie theatre where he occasionally goes to a movie. Undeterred by heavy traffic, he leads the way across busy streets until we come to a single storey block of stucco flats. He is excited as he surveys the flat he used to live in: the small garden, the rickety gate he used to try and climb over or squeeze under, the garage where his bike was stored. Paolo's

mother phones to ask where we are. She is waiting at the school. The return route is also peppered with memories for Paolo: we stop on a railway bridge to look at the railway lines. 'I like looking at the lines. And sometimes there is a train,' he says. He stops outside a shop advertising tailoring and clothes alterations. 'My mum used to bring her clothes in here to get them fixed or if she wanted something made … can we go in?' In the heart of the shop at the end of a long corridor, a customer is standing on a plinth in a long ivory gown while a woman sitting on the floor discusses the length of the hem. 'It's the same person! She's still here!' Paolo is excited. He steps forward, and the dressmaker looks up and recognises him: 'Hello, I haven't seen you in a long while – how are you? And how is your mother?' 'She's good,' says Paolo. The woman smiles again, then returns to the hem. We return to the street and continue our walk. Paolo points out places he has eaten with his family and bought take-away meals, a clothing shop where another of his mother's friends used to work and a home appliance store where they had once bought a fridge. Finally, we are back at the school: 'I really enjoyed going on our walk,' he says.

Paolo was completely at ease, animated and attuned to his environment – both physical and social – throughout the walking interview. He knew his surroundings intimately and delighted in the familiarity of his neighbourhood and the connections he had made with shop owners and businesspeople (Waygood and Friman 2015). He had a strong sense of place and belonging tied into his experiences, past and present, with place and people.

Our walking interview with Jagan starts from his grandmother's house, in the same suburban neighbourhood he has lived in for the past 10 years. His mother or father drop him off there after school on the afternoons he does not have soccer practice, then collect him later. Jagan is anxious and wants to know where we want him to go. It's up to him, we tell him. 'I don't know much about here,' he says. So, does he have a favourite neighbourhood place? 'I don't know a lot of places in my neighbourhood.' Does he have friends close by he plays with? 'No.' 'So you just stay home?', we ask. 'Yeah … I don't go in my neighbourhood.' He repeats he just stays home, or sometimes rides his bike up and down outside his house. 'My mum doesn't let me go past here … it's not really safe.' He says his parents worry about people in their neighbourhood. As we walk from his grandmother's house to his own home, Jagan becomes more anxious: 'I don't think we go this way', he says. 'I think this is the wrong way. I think I should go back. I don't want to get lost.' If he could change one thing about his neighbourhood, what would it be? 'Make it more safe', he says.

In stark contrast to Paolo, Jagan's perceptions of his neighbourhood appeared to be governed by fear – both his parents' and his own – which prevented him from interacting with either his physical or social neighbourhood environments.

A Good Neighbourhood to Live, Walk About and Play In?

The KITC children's ideas about what made a good neighbourhood were fairly consistent and echoed those expressed elsewhere (Chawla 2002; Freeman and Tranter 2011; Nordstrom 2010; O'Brien 2003): feeling safe, having places to play and being able to meet with friends. Almost all children across all nine neighbourhoods said they liked their neighbourhoods and felt safe in them. Jagan was one of the very few exceptions. Some of the comments made during walking interviews by other children living in Jagan's neighbourhood were that it was 'a really safe neighbourhood', 'basically a nice neighbourhood' and 'pretty peaceful'. They also talked of playing with friends in the local park and on the street, and walking to visit and play with friends in their homes.

Parents consistently worried about their children's safety because of concerns about traffic and stranger danger, and this played out in decisions over whether or not to allow their children to walk (or scooter or bike) unsupervised to school. However, despite localised concerns expressed by some children about ferocious dogs, which scared them, rubbish, broken glass and tagging, which affronted them, and on occasion, 'bad people and drinking', which frightened them and made them avoid certain areas, most children enjoyed being out and about in the public realm. It was difficult in this study to tease out perceptions of risk from actual risk posed by children's independent mobility and play in their neighbourhood *third places*, including on the journey to school.

Reflections

Our findings highlight the extent to which parental and children's fears of the dangers of traffic and strangers (Kearns and Collins 2006) restrict independent mobility, including on the trip to school, and render children's outdoor play an increasingly adult-dependent activity. But they also provoke questions about the extent to which children's well-being and their right to move about and play safely in the public domain has been disregarded in urban design and planning practice (Gleeson and Sipe 2006).

While currently built environment characteristics, coupled with protectionist discourses of safety and risk, restrict children's presence, independent mobility and play in the public domain, the children's accounts reported on here highlight the nascent properties of play in these settings: there is always potential for play to break out anywhere and everywhere, prefiguring the playful potential of public spaces as it does so. Children's playful practices in the public realm suggest possibilities for the creation of more playful cities – for children and adults alike.

The *third place* framework was useful in teasing out intersections between children's lives and different areas of the public realm that afforded

opportunities for independent play and travel to school. For instance, while *destinations* are the main *third place* focus in urban planning, with the *de facto* confinement of children to age-specific destinations like playgrounds and parks, streets (as both *destinations* and *transitory zones*) were highly valued activity spaces. As well as being routes to school, they were somewhere children could scooter, skate, run or bike, and on quiet suburban streets, play ball games with friends, and use kerbs and bumps to do skateboard and scooter tricks. These usages challenge the primary purpose of roads and pavements as efficient thoroughfares for pedestrian, motor vehicle and other through traffic. In this way, children's presence and play, in *transitory third places* in particular, challenge adult hegemony of the city, injecting a playful presence as they transform and repurpose places, disregarding their primary, adult-coded purposes.

Being out and about on the street and other *third places* – whether purposefully journeying to school, playing games or just hanging out – provided children with occasions to walk and talk with friends, to look at people, gardens, graffiti, shop displays and cafes, to connect with shop owners and businesspeople. In so doing, children developed an affective connection to neighbourhood places and people and an embodied a sense of place.

Acknowledgements

We thank the children and their parents for their generous participation. The research was funded by the Health Research Council of New Zealand and the Royal Society Marsden Fund.

References

Alexander, Stephanie, Katharine Frohlich, and Caroline Fusco. 2012. 'Playing for health? Revisiting health promotion to examine the emerging public health position on children's play'. *Health Promotion International* 29, no. 1/Supplement 1: 155–64.

Alexander, Stephanie, Katharine Frohlich, and Caroline Fusco. 2014. 'Problematising "play-for-health" discourses through children's photo-elicited narratives'. *Qualitative Health Research* 24, no. 10/Supplement 10: 1329–41.

Alparone, Francesca, and Maria Pacilli. 2012. 'On children's independent mobility: The interplay of demographic, environmental and psychological factors'. *Children's Geographies* 10, no. 1/Supplement 1: 109–22.

Auckland Council. 2017. *Future play spaces survey*. Auckland, New Zealand.

Carroll, Penelope, Octavia Calder-Dawe, Karen Witten, and Lanuola Asiasiga. 2019. 'A prefigurative politics of play in public places: Avoiding cracks, being a superhero, climbing trees – children claim their democratic "right to the city" through an ABC of play'. *Space and Culture* 22, no. 3/Supplement 3: 294–307. https://doi.org/10.1177/1206331218797546.

Carroll, Penelope, Karen Witten, Robin Kearns, and Phil Donovan. 2015. 'Kids in the city: Children's use and experiences of urban neighbourhoods in Auckland, New Zealand'. *Journal of Urban Design* 20, no. 4/Supplement 4: 417–36. https://doi.org/10.1080/13574809.2015.1044504.

Carver, Alison, Anna Timperio, and David Crawford. 2008. 'Playing it safe: The influence of neighbourhood safety on children's physical activity: A review'. *Health & Place* 14: 217–27.

Chawla, Louise, ed. 2002. *Growing up in an urbanising world*. London: Earthscan.

Christensen, Pia. 2003. 'Place, space and knowledge: Children in the village and the city'. In *Children in the city, home, neighbourhood and community*, edited by Pia Christensen and Margaret O'Brien, 13–28. London: Routledge Falmer.

Cordovil, Rita, Duarte Arajo, Gert-Jan Pepping, and Jaoa Barreiris. 2015. 'An ecological stance on risk and safe behaviours in children: The role of affordances and emergent behaviours'. *New Ideas in Psychology* 36: 50–59.

Duncan, Scott, and Julia McPhee. 2015. *State of play survey*. Auckland: Auckland Council.

Egli, Victoria, Lisa Mackay, Charlotte Jelleyman, Erika Ikeda, Stephanie Hopkins, and Melody Smith. 2020. 'Social relationships, nature, and traffic: Findings from a child-centred approach to measuring active school travel route perceptions'. *Children's Geographies* 18: 667–83. https://doi.org/10.1080/14733285.2019.1685074.

Elsley, Susan. 2004. 'Children's experience of public space'. *Children & Society* 18: 155–64. https://doi.org/10.1002/CHI.822.

Freeman, Claire, and Paul Tranter. 2011. *Children and their urban environment: Changing worlds*. London, UK: Earthscan.

Furedi, Frank. 1997. *Culture of fear: Risk taking and the morality of low expectation*. London: Cassell.

Fyhri, Aslak, Randi Hjorthol, Roger Mackett, Trine Fotel, and Marketta Kytta. 2011. 'Children's active travel and independent mobility in four countries: Development, social contributing trends and measures'. *Transport Policy* 18, no. 5/Supplement 5: 703–10.

Gardner, Paula. 2011. 'Natural neighborhood networks – Important social networks in the lives of older adults aging in place'. *Journal of Aging Studies* 25: 263–71. https://doi.org/10.1016/j.jaging.2011.03.007.

Gleeson, Brendan, and Neil Sipe, eds. 2006. *Creating child friendly cities: Reinstating kids in the city*. London: Routledge.

Gray, Peter. 2011. 'The decline of play and the rise of psychopathology in childhood and adolescence'. *American Journal of Play* 3: 443–63.

Karsten, Lia. 2005. 'It all used to be better?' *Children's Geographies* 3: 275–90.

Kearns, Robin, and Damian Collins. 2006. 'Children in the intensifying city: Lessons from Auckland's walking school buses'. In *Creating child friendly cities: Reinstating kids in the city*, edited by Brendan Gleeson and Neil Sipe, 105–20. London: Routledge.

Kyttä, Marketta. 2004. 'The extent of children's independent mobility and the number of actualized affordances as criteria for child-friendly environments'. *Journal of Environmental Psychology* 24, no. 2/Supplement 2: 179–98.

Lalli, Marco. 1992. 'Urban-related identity: Theory, measurement and empirical findings'. *Journal of Environmental Psychology* 12: 285–303.

Lefebvre, Henri. 1968. *Le Droit à la ville [The right to the city]*. 2nd ed. Paris: Anthropos.

Lennard, Henry L, and Susan Crowhurst Lennard. 1992. 'Children in public places: Some lessons from European cities'. *Children's Environments* 9, no. 2/Supplement 2: 37–47.

Lin, En-Yi, Karen Witten, Melody Oliver, Penelope Carroll, Lanuola Asiasiga, Hannah Badland, and Karl Parker. 2017. 'Social and built-environment factors related to children's independent mobility: The importance of neighbourhood cohesion and connectedness'. *Health and Place* 46: 107–13.

Mackett, Roger, Belinda Brown, Yi Gong, Kay Kitazawa, and James Paskins. 2007. 'Children's independent movement in the local environment'. *Built Environment* 33: 454–68.

Matthews, Hugh, Melanie Limb, and Mark Taylor. 2000. 'The street as third space'. In *Children's geographies: Playing, living, learning*, edited by Sarah Holloway and Gill Valentine, 63–79. London: Routledge.

Min, Byungho, and Jongmin Lee. 2006. 'Children's neighborhood place as a psychological and behavioral domain'. *Journal of Environmental Psychology* 26, no. 1/Supplement 1: 51–71.

Ministry of Transport. 2009. *New Zealand travel survey*. Wellington, New Zealand.

Moore, Robin. 1986. *Childhood's domain*. London: Croom Helm.

Nordstrom, Maria. 2010. 'Children's views on child-friendly environments in different geographical, cultural and social neighbourhoods'. *Urban Studies* 47, no. 3/Supplement 3: 514–28.

O'Brien, Margaret. 2003. 'Regenerating children's neighbourhoods: What do children want?' In *Children in the city, home, neighbourhood and community*, edited by Pia Christensen and Margaret O'Brien, 142–61. London: Routledge Falmer.

Oldenburg, Ray, ed. 2001. *Celebrating the third place: Inspiring stories about the 'Great Good Places' at the heart of our communities*. New York, NY: Marlowe & Company.

Oliver, Melody, Karen Witten, Robin Kearns, Suzanne Mavoa, Hannah Badland, Penelope Carroll, Chelsea Drumheller, Nicola Tavae, Lanuola Asiasiga, Su Jelley, Hector Kaiwai, Simon Opit, En-Yi Lin, Paul Sweetsur, Helen Moewaka Barnes, Nic Mason, and Christina Ergler. 2011. 'Kids in the city study: Research design and methodology'. *BMC Public Health* 11, no. 587/Supplement 587.

Piaget, Jean. 1982. *Play, dream and imitation in childhood*. New York, NY: WW Norton & Co.

Proshansky, Harold, and N Gottlieb. 1989. 'The development of place identity in the child'. *Zero to Three* December: 18–25.

Prout, Alan. 2000. 'Children's participation: Control and self-realisation in British Late Modernity'. *Children & Society* 14: 304–15.

Randolph, Bill. 2006. *Children in the compact city: Fairfield as a suburban case study*. Sydney, NSW: City Futures Research Centre.

Shaw, Ben, Martha Bicket, Bridget Elliott, Ben Fagan-Watson, Elisabetta Mocca, and Mayer Hillman. 2015. *Children's independent mobility: An international comparison and recommendations for action*. London: Policy Studies Institute. http://www.nuffieldfoundation.org/sites/default/files/files/7350_PSI_Report_CIM_final.pdf.

Skår, Margrete, and Erling Krogh. 2009. 'Changes in children's nature-based experiences near home: From spontaneous play to adult-controlled, planned and organised activities'. *Children's Geographies* 7, no. 3/Supplement 3: 339–54.

Smith, Melody, Erika Ikeda, Greer Hawley, Suzanne Mavoa, Jamie Hosking, Victoria Egli, Jinfeng Zhao, Lisa Mackay, Niamh Donnellan, Rebecca Amann, Hamish Mackie, and Karen Witten. 2020. 'An integrated conceptual model of environmental needs for New Zealand children's active travel to school'. *Journal of Transport & Health* 16: 100814. https://doi.org/10.1016/j.jth.2019.100814.

Soja, Edward. 2010. *Seeking spatial justice*. Minneapolis, MN: University of Minnesota Press.

Thomson, Joanne, and Chris Philo. 2004. 'Playful space? A social geography of children's play in Livingston, Scotland'. *Children's Geographies* 2: 111–30.

Tranter, Paul, and Eric Pawson. 2001. 'Children's access to local environments: A case-study of Christchurch, New Zealand'. *Local Environment* 6, no. 1/Supplement 1: 27–48.

United Nations. 1989. *Convention on the Rights of the Child*. http://www.unicef.org.uk/Documents/Publication-pdfs/UNCRC_PRESS200910web.pdf.

United Nations. 2017. *Habitat III New Urban Agenda*. https://uploads.habitat3.org/hb3/NUA-English.pdf.

Valentine, Gill. 2004. *Public space and the culture of childhood*. Aldershot: Ashgate.

Waygood, E. O. D., and Margreta Friman. 2015. 'Children's travel and incidental community connections'. *Travel Behaviour and Society* 2, no. 3/Supplement 3: 174–81.

Waygood, E. O. D., Margrete Friman, Lars E. Olsson, and Ayako Taniguchi. 2017. 'Transport and child well-being: An integrative review'. *Travel Behaviour and Society* 9: 32–49.

Wood, Lisa, Lawrence D. Frank, and Billie Giles-Corti. 2010. 'Sense of community and its relationship with walking and neighbourhood design'. *Social Science & Medicine* 70, no. 9/Supplement 9: 1391–90.

Woolley, Helen. 2017. 'Being ourselves: Children and young people sharing urban open spaces'. In *Designing cities with children and young people*, edited by Kate Bishop and Linda Corkery, 92–105. New York, NY: Routledge.

Woolley, Helen, Christopher Spencer, Jessica Dunn, and Gwyn Rowley. 1999. 'The child as citizen: Experiences of British town and city centres'. *Journal of Urban Design* 4, no. 3/Supplement 3: 255–82.

Chapter 7

PARENTAL CONCERNS AND PERCEPTIONS RELATED TO CHILDREN'S INDEPENDENT TRAVEL TO SCHOOL: A CASE STUDY IN GERMANY

Joachim Scheiner[1] and Stefan Lohmüller[2]

[1]Department of Spatial Planning, Technische Universität Dortmund, 44227 Dortmund, Germany

[2]Wilhelm-Löbbe-Alle 26, 44532 Lünen

Introduction

Children's independent travel to and from school has sharply declined in the past decades while a growing number of children are taken to and from school by car. This trend is well documented by long-term repeated data collection in various countries (Shaw et al. (2013) for England and Germany; Schoeppe et al. (2016) for Australia; Mitra et al. (2016) for Canada; Kyttä et al. (2015) for Finland; McDonald (2012) for the United States) and by comparisons of child travel and outdoor activities with retrospective accounts of the childhoods of previous generations (parents or grandparents) (Clements 2004; Pooley et al. 2005; Woolley and Griffin 2015).

Both the increase in driving at the cost of non-motorised travel or public transport and the trend towards escorted trips at the expense of independent mobility are alarming for various reasons, including negative effects on child development, health, the environment and traffic safety (see Scheiner (2016) for a more nuanced discussion and more references). From the children's subjective perspective, independence generally seems to be valued more positively than not (Mitchell et al. 2007; Crawford et al. 2017).

There are many potential reasons for these trends, including parents' fears, concerns, perceptions and attitudes towards their children travelling without adult company. Their concerns include stranger danger, other

children or adolescents bullying their child, lack of traffic safety and more. The importance of parents' perceptions for their children's travel and territorial range has been documented in numerous studies (Wilson et al. 2018; Vlaar et al. 2019; Scheiner et al. 2019a, b). Parental fear has even been recognised as the most significant factor in children's access to outdoor play (Valentine and McKendrick 1997). At the same time, there seems to be some tension in parental attitudes. Little (2015) reports on semi-structured interviews with mothers of four- to five-year-old children in Sydney that showed how these mothers clearly acknowledge the benefits of (even risky) outdoor playing and express a desire to provide opportunities for their children to engage in such play, but at the same time struggle with their own fears about their children's safety (similarly, O'Connor and Brown 2013). Suffice it to say that parental practices also vary widely among individuals, including, for instance, 'helicopter parents' and 'engaged and enabling parents' (Joelsson 2019, see also Visser et al. 2015).

Parents are the ultimate decision-makers when it comes to 'licencing' their children to take part in independent travel (Nikitas et al. 2019; Seraj 2011), even though children often seek to impact their parents' decisions (Crawford et al. 2017). In line with this, studies have found that parental perceptions of the neighbourhood are more strongly related to a child's mode uses than the child's own perceptions (Timperio et al. 2004; Wilson et al. 2018). Yet, despite the crucial role of parental fears surprisingly little is known about (a) trends in such fears over time, and (b) the factors that affect these fears (Foster et al. 2015; Kim and Lee 2020; Seraj 2011; Zubrick et al. 2010). More knowledge about these factors would help planners and policymakers address these concerns and design environments that support children's independent travel and use of active modes.

This chapter presents empirical work on parental perceptions and concerns about their child's mobility, taken from a case study in the medium-sized town of Lünen near Dortmund, Germany. The chapter presents descriptive analyses of parental concerns and perceptions. This is followed by an analysis regressing selected dimensions of parental concerns and perceptions to household and child sociodemographics, the built and transport environment, mode use and gender role attitudes. Conclusions are drawn for research and urban planning.

State of the Research

This chapter is about parental concerns and perceptions related to their children's independent travel, that is about subjective, mental factors among parents that may shape their decision-making as regards allowing their children to go out without adult supervision. Such concerns revolve around a number of risks that children may face when going out in the public realm alone

(or with other children), including harm, sexual assault or abduction by an (adult) stranger, bullying (by other children or adolescents), traffic safety risks, dog attacks or getting lost (Bennetts et al. 2018; Crawford et al. 2017; Scheiner et al. 2019a). Parental concerns may, however, also be more generalised, rather than being targeted towards specified risks (Bennetts et al. 2018).

Zubrick et al. (2010) provide a context for understanding parental fears. They distinguish between three dimensions: societal and cultural, community and individual contexts. All of them include various subdimensions, for example media reports and social norms about 'good parenting' (societal and cultural contexts), the built environment and traffic conditions on the route taken (community contexts) and psychological states, the parents' own experiences and other socialisation factors, parental beliefs about the child's skills and maturity, child age and gender (individual contexts). The dimensions are overlapping. Thus, the social environment (community capital, neighbourhood cohesion) can be considered part of the societal context or community context. Also, parental, child, social and built environment factors may interact with each other in multiple ways (Bennetts et al. 2018). For instance, parental fear of crime for their children is correlated with fear for themselves and a lower sense of community (Prezza et al. 2005). Both can in turn be shaped by the parents' own experiences, for example in terms of harassment or bullying (Bennetts et al. 2018).

Importantly, Zubrick et al. (2010) highlight that although parents' fears are subjective by nature, they are both rational and irrational. Their irrational element emerges from the link between actual risk and subjective perceptions of risk, which vary widely. At the same time, parental fear is rational because children 'only gradually acquire the physical, perceptual, cognitive and social skills to protect themselves from immediate threat or danger' (Zubrick et al. 2010, 11).

Seraj et al. (2012) aim to identify the influences on parental attitudes toward their children walking or bicycling to school. Their study analyses five attitude measures based on data from California, using an ordered response model system. The attitudinal questions are answered by one parent for one randomly chosen school-aged child. They relate to the route to school, respectively, including concerns about distance, violence or crime, speed of traffic, the amount of traffic and poor weather in the area. Explanatory variables include attributes of the child, the parents, the household, the school and the built environment. Results suggest that school accessibility, child and parent mode use, and sociodemographic characteristics shape parental attitudes. Specifically, fear of crime is higher among respondents with less income and parents of girls (supported by Bennetts et al. (2018), Foster et al. (2015), Schoeppe et al. (2015) and Westman et al. (2017)). The results for

parents' mode use are mixed but generally suggest that those using non-car modes are less concerned about risks. The same is true if the child already uses non-motorised modes, a finding that is supported by qualitative work (Zuniga 2012). Descriptives show that volume of traffic, speed of traffic and distance to school are the most serious issues for parents.

Foster et al. (2015) examine, first, the social and built environment correlates of parents' fears about strangers harming their child and, second, their perception of the likelihood that this will actually happen (perceived risk level). The measures used were constructed as means from three items. The study focuses on neighbourhood attributes, and the data were collected in Perth, Australia. Results suggest that parents perceive neighbourhoods that encourage walking but minimise motorised traffic as safe. This may be interpreted in terms of such neighbourhoods providing social control or 'natural surveillance'. This idea can be traced back to Jacobs' (1961) hypothesis that lively streets are safer streets due to the presence of other people, who are consequently viewed as a source of safety rather than a source of danger (Jorgensen et al. 2012; Maruthaveeran and van den Bosch 2014). They also find that fathers perceive less risk from strangers than mothers (and also show lower levels of fear, but the effect is insignificant).

This is supported by qualitative work by Schoeppe et al. (2015) who report that mothers are more restrictive in their attitudes towards children's outdoor play range than fathers.

The importance of natural surveillance and social interaction is supported by qualitative research. Francis et al. (2017) conducted focus groups with Australian parents to study neighbourhood features that influence parents' fear of strangers. Their results highlight the importance of visibility, people being on the streets, careful upkeep of neighbourhoods, neighbourhood social networking and media reports.

Bennetts et al. (2018) study factors that impact generalised parental fear about children's independent travel (measured using four items on a five-point scale), and fear of strangers (using five items). Their work is based on an Australian sample of parents of children aged 9–15, stratified into three age brackets. Their results show various expected effects of attitudes, perceptions, social norms, place of residence, perceived traffic level and other built environment measures, and sociodemographics. Their study does not support an effect of parent gender on fear.

Kim and Lee (2020) use data from Austin, Texas, and ordinary least squares (OLS) regression to study the effects of the built and natural environment on parental safety concerns, controlling for sociodemographics, walking attitudes and 'social factors' capturing neighbourhood social capital and the perception that other children in the neighbourhood walk to school. The parents' concerns

are measured as a mean scale of eight items capturing various sources of fear, which is validated by principal component analysis. The survey data were matched with a large number of objective measures of the environment along the route to school, including traffic infrastructure conditions, crime and accident hotspots, parks, slopes, land use types, vegetation and temperatures.

Results include that lower intersection density, the presence of highways, railroads, bike lanes or sex offenders' homes increase safety concerns. The authors suspect that bike lanes 'may act as a barrier to ATS [active travel to school] among children because parents may have a fear of bicyclists due to the high vulnerability of child pedestrians' (Kim and Lee 2020, 8). Also, positive attitudes towards walking increase safety concerns, while for 'social walking factors' (e.g. 'my family and friends like the idea of walking to school') it is the other way round. While some of these associations may not be intuitive, this is not uncommon. Multiple instances can be found in the literature for counterintuitive associations between the actual built environment on the one hand, and perceived built environment and/or mobility licences on the other. For instance, Waygood and Susilo (2015) find that the parental perception that traffic is slow and safe has a negative effect on the probability that their child walks to school. They suggest this perception 'may be associated with neighbourhoods that have low congestion, thus making it easier for the parent to drive their child' (Waygood and Susilo 2015, 128).

While van den Berg et al. (2020) study travel satisfaction and mood among children aged 7–12 years in the Netherlands, their path analysis also allows the detection of factors that impact parental concerns. The findings show that parental safety perceptions (measured by a combination of nine items capturing perceptions of the safety of traffic and child safety skills) increase with the age of the child, income, perceived road network connectivity and quality of bike/walk paths, and social cohesion (neighbourhood social capital).

Taken together, the existent research indicates multiple factors that affect parental concerns regarding their children's independent travel. These include the physical and social environment, parents' perceptions of their child's skills and competences, parents' own psychological state, including fears, their experiences, and sociodemographic factors.

A dimension about which little is known is the potential association between gender ideologies and parental fear. Parenting styles have been found to be distinctly different between fathers and mothers, with fathers permitting more adventurous behaviours and mothers being more restrictive (Barker 2011; Schoeppe et al. 2015). This is in line with the findings that mothers have greater safety concerns with respect to traffic (Hsu and Saphores 2014) and stranger danger (Prezza et al. 2005) than fathers, although both mothers and fathers may balance their attitudes 'between protection and encouragement'

and 'plac[e] themselves along a continuum between helicoptering and being engaged and enabled' (Joelsson 2019, 600). These findings suggest that parental fear may be associated with gender role ideologies rather than sex.

From a planner's perspective, environmental factors are most important, as they provide a direct link to policies that aim to relieve parental fears and thereby support children's independent travel. However, despite a (moderate) number of existing studies, researchers summarise that 'little is known about how parental safety concerns are associated with surrounding environmental conditions' (Kim and Lee 2020, 2).

This chapter presents descriptive analyses of parental perceptions and concerns, followed by an analysis regressing selected dimensions of parental concerns to household and child sociodemographics, gender role ideologies, mode choice and the built and transport environment.

Data and Methodology

Survey data and study site

This chapter uses questionnaire data collected in January 2017 for a master thesis (Lohmüller 2017), and matched with environment data collected in a funded project (see below). Parents of children in seven out of 14 primary schools in Lünen, Germany, were asked to complete a questionnaire. This was distributed via teachers in the classrooms and collected a week later, although a second round of collection two weeks later made sure that late responses were included. All children in the schools (forms 1–4, age 6–10, n = 1,763) received a questionnaire. Separated parents were informed that the questionnaire should be completed by the parent where the child spends most of his/her time on schooldays. A response rate of 60.3% resulted in n = 1,064 completed questionnaires. This unusually large response rate testifies to the strong motivation of the schools and parents to support the study.

Lünen is a medium-sized town with just under 90,000 inhabitants located at the border between the metropolitan Ruhr area and the more rural Münsterland. It is suburban in character, and it can be considered a typical example of mid-to-late twentieth-century developments in low-to-middle-class regions. The weather at the time of the survey was cool but sunny and dry (no snow). Daytime temperatures were slightly above freezing, which is important to understand parental attitudes towards their children's independent travel.

The following information was collected: the child's trip to and from school; child and household sociodemographics; transport resources and travel behaviour of the responding parent and her/his partner; the responding parent's attitudes about gender role work-sharing in the household

(four items); the household residential address; the responding parent's perceptions and concerns about safety, security, the social environment and the transport environment on the trip to school. This included 20 items that captured the level of trust in other traffic participants, neighbourhood trust, trust in the capabilities of the child, fears related to the child when (s) he is outside and seven items related to perceived transport infrastructure design and traffic dangers on the route to school (i.e. 27 items in total).

The questionnaire explicitly stated that providing information on home address and household income was not mandatory (though this was of course a matter). This statement was included due to privacy concerns and resulted in item non-responses in many cases. Complete information for regression modelling is available in 581 cases, with 477 respondents omitting the income question and 385 respondents omitting their address. The net sample still reflects a good response rate of 33% of the gross (n = 1,763).

The transport and built environment

The survey data were matched with detailed transport and built environment information. This information was extracted from digital sources and collected manually on site in August 2017 in a funded project. Route information was collected for the shortest walking route including formal or informal shortcuts (paths and tracks suitable only for non-motorised transport) that were detected manually on site.

The geodata used includes information on speed limits, the classification of roads, pavement designs, pedestrian crossing facilities, parking regulations, right-of-way regulations at intersections, land use along the trip and traffic safety. The survey of parking regulations was limited to intersections where it is most likely that parked vehicles restrict the view for crossing pedestrians. Various artefacts (plants, street furniture, vehicles, etc.) restrict the view at road crossings, and some are temporary. An attempt to reduce bias was made by surveying only on weekdays during working hours. Still, the information captured on restricted view may be arbitrary. Information on traffic loads was not available, but it can be assumed that they are strongly associated with road classifications.

This vast amount of information was used in two different ways. Most research in the field relies on the simultaneous estimation of the effects of a number of separate variables. However, such 'variable approaches' may mask interactions between the variables, that is do not provide a holistic picture of a route, as many geographical variables correlate with each other. On the other hand, holistic approaches that capture the 'entirety' of a route do not permit a detailed examination of the effects of certain land use or road attributes. Both approaches were therefore combined. Earlier work using

the same data to study child mode use and independent travel (Scheiner et al. 2019a, b) suggested that three issues are particularly relevant for parental concern: the need to cross roads, the need to walk along inadequate pavements and traffic safety. Therefore, original measures were used here, but other geographical variables were reduced in a principal component analysis to account for the general character of the route.

Traffic safety

The Dortmund police headquarters provided accident data covering the period 2008–2016. The data distinguish victims by age group, mode and injury severity. Several measures that capture traffic safety along the route were tested: the number of serious injuries and fatalities that occurred within the period of observation; the number of injured or killed children (in total or limited to those who walked or cycled); the need to pass pedestrian accident hotspots or child accident hotspots.

The results showed that accident hotspots explain parental concerns better than the mere number of injuries along the route, especially when it comes to pedestrian injury (regardless of age) or child injury (pedestrian or cyclist) hotspots. Both types of hotspots were merged into a binary variable that captures whether or not the child needs to pass either of these two hotspot types. A 'hotspot' is defined here as a place where at least four pedestrians were injured or killed in the observation period, or at least three children were injured or killed as pedestrians or cyclists. These thresholds result in 16 and 15 hotspots, respectively, and 26 hotspots overall. All hotspots are intersections. The operational definition includes a radius of 30 m around the centre of the intersection.

Road crossings and pavement width

Data on road infrastructure along the route does not necessarily refer to the exact route a child actually takes. For instance, there may be a convenient pavement on one side of the road but not on the other, and this may suggest that the road is crossed an extra time.

The 'optimal' route was manually reconstructed based on local knowledge and plausibility considerations. Width of pavement (none, <1 m, 1–1.5 m, >1.5 m) and number of road crossings required by type (light signal, zebra crossing, pedestrian refuge island, other pedestrian facility, no facility) were extracted. The latter mainly refers to low-speed residential roads. The earlier work cited above suggested that the number of zebra crossings that need to be crossed and the length of road sections with narrow pavements (<1 m) are particularly important for parental escort and child mode use. These two variables are thus used for analysis.

Other built environment variables

A total of 31 variables (excluding traffic safety and the need to cross roads or use narrow pavements) were reduced to dimensions using principal component analysis. This statistical procedure is used to reduce a large number of correlated variables to a smaller number of latent 'dimensions' captured by the original variables. In this case, the use of Varimax rotation (Eigenvalue >1) resulted in eight dimensions explaining 75.1% of the variance of the initial variables (Table 7.1). This means that the resulting dimensions capture three-thirds of the original variables' 'spread'. Only three factors (marked bold in the table) even exceeded a low level of significance of $p < 0.20$ in regression, and these were retained in the modelling process. The resulting dimensions of the built environment can be seen in the heading of Table 7.2.

Parental concerns and perceptions

Principal component analysis with Varimax rotation (Eigenvalue >1) was used again to reduce the 27 items that captured the parents' perceptions and concerns to a limited number of dimensions (see Section 'Other built environment variables' for more explanation). This resulted in eight dimensions explaining 61.5% of the variance of the initial variables, and these dimensions can be seen in the heading of Table 7.2. This procedure has been used before in related studies (Guliani et al. 2015). As there is complete information on all items in only 851 cases, we used the factors to group variables into mean value scales when at least two valid answers were available for any scale, as indicated by the horizontal lines in Table 7.2. Three items (shown in italics) were excluded to achieve higher scale validity. Cronbach's alpha ranges between 0.60 and 0.86 for all scales but the last ('child is competent', $\alpha = 0.31$). After some discussion of this issue, it was decided to keep the scale anyway for theoretical reasons, as it may be expected to exhibit an important effect on child travel (e.g. Villanueva et al. 2013).

Sociodemographics

A variety of sociodemographic variables were tested, including household type (traditional family, lone parent, other), household equivalent income, parental education level (four levels), parental employment (full-time, part-time, marginal, none), age and nationality, child age and gender, and presence of a sibling. Note that, strictly speaking, all parental attributes refer to the respondent and his/her partner, if applicable, that is to the household in which the child lives.

Table 7.1 Built environment: principal component analysis results

	General residential area	Centre area	Industry and trade area	Major road with restricted view	Woodland	Play street	Traffic calming	High-speed road
	1	2	3	4	5	6	7	8
Housing dominates (1, 3)	0.88							
Kerb-side parking (2)	0.83							
Speed limit 30 km/h (1)	0.78							
Parking on pavement (2)	0.76							
Well-lit (1)	0.71						0.45	
Cross parking (2)	0.69							
Right of way reg.: yield sign (2)	0.66	0.44						
Shopping (minor) (1, 3)	0.66		0.31					
Parking on carriageway (2)	0.65			0.36				
Right of way reg.: priority to the right (2)	0.64			0.40			0.37	
Pavement width <1.5 m, side 1 (1)	0.64			0.34			−0.35	
Shopping dominates (1, 3)		0.86						
Angle parking (2)		0.80		0.33				
Right of way reg.: light signal (2)		0.72						0.39

Route crosses industrial area (1)			0.80		0.31			
Route crosses trade/retail area (1)			0.71					
Trade and industry dominates (1, 3)			0.68					–0.31
Trade and industry (minor) (1, 3)	0.36		0.62					
Restricted view (number)		0.31		0.86				
Major road (1)		0.31		0.86				
Pavement width <1.5 m, side 2 (1)	0.31			0.65		–0.30		
Woodland dominates (1, 3)					0.84			
Track separate from road (1)					0.72	0.45		
Route crosses woodland (1)			0.54		0.67			
Green area dominates (1, 3)			0.19		0.61	0.48		
No pavement, side 2 (1)						0.82		
Speed limit 10 km/h (1)						0.76		
No pavement, side 1 (1)	0.35				0.31	0.45	0.37	
No parking (2)	0.32						0.81	
Right of way reg.: roundabout (2)							0.77	
Speed limit > 50 km/h (1)								0.79
R^2	75.1							

(1) measured in metres along the route
(2) number of intersections where this is the case
(3) Land-use functions were manually surveyed in addition to using the local land-use plan, as a manual inspection provides more detail. A distinction was made between dominant and minor (additional) land uses in a road section linking two junctions. The dominant or minor character was rated by trained student staff and confirmed by a second person.
Only loadings exceeding |0.3| are shown.

Table 7.2 Parental attitudes and concerns: principal component analysis results

	Trust in other road users	Neighbourhood social capital	Diffuse fear	Stranger danger	Pavements and lighting in good condition	Major roads and cars	Strong protective attitude	Child is competent
	1	2	3	4	5	6	7	8
Other road users give priority to my child at a pedestrian crossing	0.83							
Drivers are careful when they drive close to my child	0.81							
Cyclists watch out for my child	0.80							
I trust that drivers see my child	0.73							
Most neighbours know me		0.92						
I know most of my neighbours		0.90						
In our neighbourhood we care for our neighbours' children		0.79						
I feel uncomfortable when my child walks along dark paths			0.79					
My child should be accompanied by an adult in the dark			0.75					
I feel safer when my child plays close to our residence when (s) he is outside			0.64					
I feel uncomfortable when my child walks on narrow pavements			0.54				0.38	
My child is accompanied more often in winter than in summer			*0.41*					
My child could be bullied by adolescents or other children				0.87				
My child could be harassed or hurt by adolescents or other children				0.82				
My child could be harassed by adults				0.76				

The street lighting on the route to school is sufficient			0.83		
The pavements on the route to school are wide and in good condition			0.80		
Walking and cycling paths on the route to school are dark and lonesome			*–0.54*		*0.37*
I consider the route to school safe			*0.49*	*–0.37*	
There are roads with high traffic levels on the route to school				0.79	
Roads with high traffic levels on the route to school have light signals				0.69	
Cars on the route to school are parked in dense lines				0.67	
I do not want my child to go anywhere without an adult					0.71
I want to know exactly what my child is doing at any time					0.66
My child is careless in road traffic*					0.53
My child is used to getting around in an urban environment					
My child knows how to behave with strangers		0.35			
R^2	61.5				

	–0.46
	0.63
	0.56

Only loadings exceeding |0.3| are shown. The lines indicate which items were grouped into scales.
Items shown in italics were not used for scales.
*Inverted for mean scale.

Parental education level and employment were tested either in separate or combined form for both parents, respectively. The combined forms (see Table 7.4) were found to perform better in terms of variance explanation, and were thus retained in the models. Parental age was excluded due to lack of significance. Parental nationality was captured by a binary variable indicating whether at least one parent did not have German citizenship. The presence of a sibling was additionally tested in two more specific forms, referring to siblings of primary-school age or elder siblings. The presence of an elder sibling was the only variant that came close to significance, which is intuitive, as parents in these cases are already experienced.

Child and parent mobility

The effects of mothers' and fathers' car use for the commute were also tested but excluded due to lack of significance. Further, a binary variable of child mode use on the morning trip to school was included to test for associations between realised mode choice and parental concerns. This variable captures whether the child has walked or cycled to school in the week prior to the survey.

Gender attitudes

Gender attitudes were recorded only for the responding parent using four items (see Table 7.3). Principal component analysis with Varimax rotation (Eigenvalue >1) resulted in two clearly distinguishable dimensions, which was called 'conservative gender roles' and 'gender equality' and jointly explain 67.3% of variance (Table 7.3). It may be surprising that the two do not appear to be two ends of a single dimension. An interpretation that arises from the items used is that even those who favour gender equality (factor 2) may have some reservations towards 'full equality' (item 3) that may be grounded in strong affection between mother and child (item 4). For parental concerns, the factors to compute mean value scales were used for easier interpretation. Cronbach's alpha values are only $\alpha = 0.48$ and $\alpha = 0.53$ here, which is less than satisfactory, and can be explained by the low number of items entering the scales.

Analysis approach

As the target variables used in this chapter are continuous and reasonably distributed (all values for skewness<|0.85|, excess<|0.45|), standard OLS regression modelling is used to unveil factors that affect parental concerns. After a first attempt, the variables that did not achieve a significance level of $p < 0.20$ in any model due to their lack of significance were excluded.

Table 7.3 Gender role attitudes: principal component analysis results

		Conservative gender roles 1	Gender equality 2
1	Both men and women should contribute to generating household income.	–0.016	**0.841**
2	Men and women should equally contribute to household work (including childcare, dishwashing, laundry, cleaning).	–0.152	**0.767**
3	Even if the woman has a job, the man should be the principal earner.	**0.855**	0.005
4	A pre-school child suffers when her/ his mother goes to work.	**0.782**	–0.182

Loadings exceeding |0.3| are shown in bold. The lines indicate which items were grouped into scales.

As noted above, mode choice may be endogenous to sociodemographics, the objective environment and the concerns under study. This may lead to biased coefficient estimates. There is considerable recent debate in transport studies about the relationship between travel behaviour and attitudes, although this does not refer to child travel.

A sensitivity analysis was performed by estimating a model excluding the mode use variable, and comparing the results. Both models were very similar with respect to coefficients and significance levels, thus attenuating concerns. Using mode choice as an external variable to understand perceptions is also supported by recent research suggesting that the effects of mode choice on attitudes (Kroesen et al. 2017) and the built environment on attitudes (Kamruzzaman et al. 2021) are stronger than vice versa, respectively. Table 7.4 gives an overview of the variables finally used in the models, that is their minimum (min), maximum (max), mean and standard deviation (SD). All variance inflation factors are smaller than 2.4 and thus do not raise much concern of multicollinearity (Schendera 2008).

Results

Descriptive results

Figure 7.1 shows parental concerns and perceptions categorised by age of child. The results suggest strong levels of diffuse fear, the perception of dense traffic and parked cars ('major roads and cars'), and lack of trust in other road

Table 7.4 Descriptives of the variables used

	Min	**Max**	**Mean**	**SD**
Major roads and cars	1	5	3.69	0.99
Trust in other road users	1	5	2.36	0.87
Diffuse fear	1	5	3.94	0.81
Woodland	−3.1	6.3	−0.01	0.97
Play streets	−1.7	6.8	0.01	0.99
High-speed roads	−2.9	6.9	0.00	1.01
Household net equivalent income (€1,000/month)	0.2	4.4	1.60	0.79
Gender role attitude: equality	1	5	4.08	0.88
Gender role attitude: conservative roles	1	5	2.57	1.17
Child age (years)	6	11	7.88	1.28
Distance to school (km)	0.01	11	1.69	1.41
	n	%		
Accident hotspot along the route	318	54.7		
Parental education				
None has a secondary school qualification level I	73	12.6		
Secondary school qualification level I (at least one parent)	136	23.4		
University entrance qualification (at least one parent)	136	23.4		
University degree (at least one parent) (reference)	236	40.6		

Parental job situation		
Father full-time, mother part-time (reference)	245	42.2
Father full-time, mother full-time	54	9.3
Father full-time, mother marginally or unemployed	158	27.2
Mother full-time, father not full-time	23	4.0
Mother not full-time, father not full-time	101	17.4
Child gender: boy	289	49.7
Child gender: girl	292	50.3
No elder sibling in household	355	61.1
Elder sibling in household	226	38.9
Household type: couple plus child(ren)	501	86.2
Household type: lone parent	69	11.9
Household type: other	11	1.9
Both parents have German nationality	486	83.6
At least one parent has no German nationality	95	16.4
Trip to school: no active travel in week before survey	238	41.0
Trip to school: active travel used in week before survey	343	59.0
Total	581	100.0

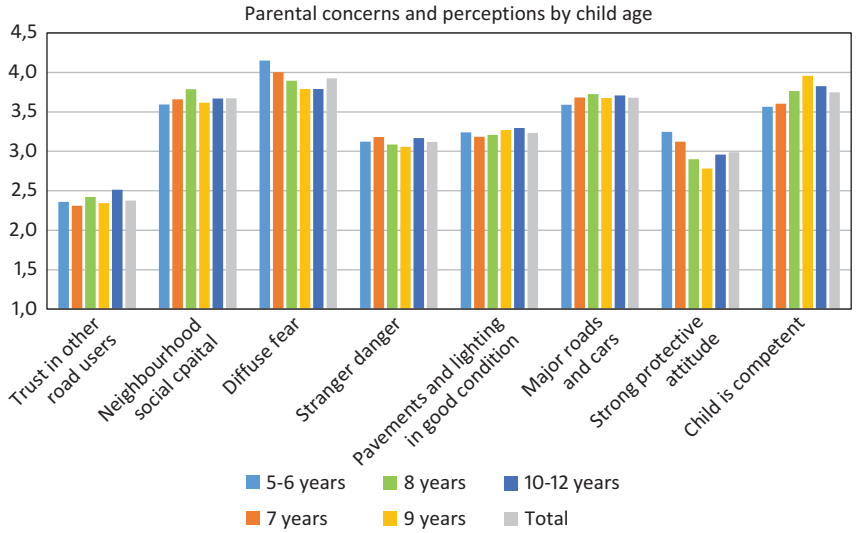


Figure 7.1 Parental concerns and perceptions by child age Age difference is significant (*F*-test, $p = 0.05$) for diffuse fear, strong protective attitude and child is competent.

users. As these three dimensions appear to be parents' strongest concerns, they are chosen for regression modelling in the subsequent section. They also reflect a large range of concerns in terms of representing parents' generalised concern (diffuse fear), their perception of the traffic environment (major roads and cars), and their perception of the social environment (trust in other road users).

On the positive side, parents generally consider their children competent, and perceive strong neighbourhood social capital, that is they assert that people in the neighbourhood know each other and look after each other's children. Protective attitudes and stranger danger range in the middle of the measurement scales (i.e. close to 'neither agree nor disagree'), and the same is true for the dimension 'pavements and lighting are in good condition'.

There are three dimensions which differ significantly by child age. Whereas diffuse fear and protective attitudes decline as children grow up, perceived child competence increases. All differences are in line with expectations. Similarly, in line with expectations is that the other dimensions do not significantly differ. All of them refer to perceptions of the environment that do not necessarily change with child age. One may object that stranger danger refers to some child age groups more than others, but note that this dimension captures harassment by adults as well as being bullied by other children or adolescents.

It may be worth noting that the variance of perceived child competence slightly declines with child age, indicating that in early school age, there

is more spread of perceived child competence. Conversely, the variance of diffuse fear clearly increases with child age, suggesting that some parents succeed better than others in reducing their fears as their children grow older (details not reported here, but available from the authors upon request).

With respect to child gender, diffuse fear is the only dimension that differs significantly. Diffuse fear is higher for girls (mean: 4.01) than boys (mean: 3.84) which is in line with expectations. Notably, there is no gender difference in stranger danger which may again be due to this dimension capturing harassment by adults as well as being bullied by other children or adolescents.

Two dimensions differ significantly by the respondent's gender. Men have significantly more trust in other traffic participants and, unexpectedly, a more protective attitude. This may be because only fathers who are primarily responsible for the child tend to complete the questionnaire, and these fathers are those with more protective attitudes.

Figure 7.2 shows parental concerns and perceptions broken down by school. Only the dimensions that differ significantly by school are presented here. Trust in other road users is lowest in the Leo and Heikenberg schools, and highest in the Gottfried and Kardinal-von-Galen schools. The low level

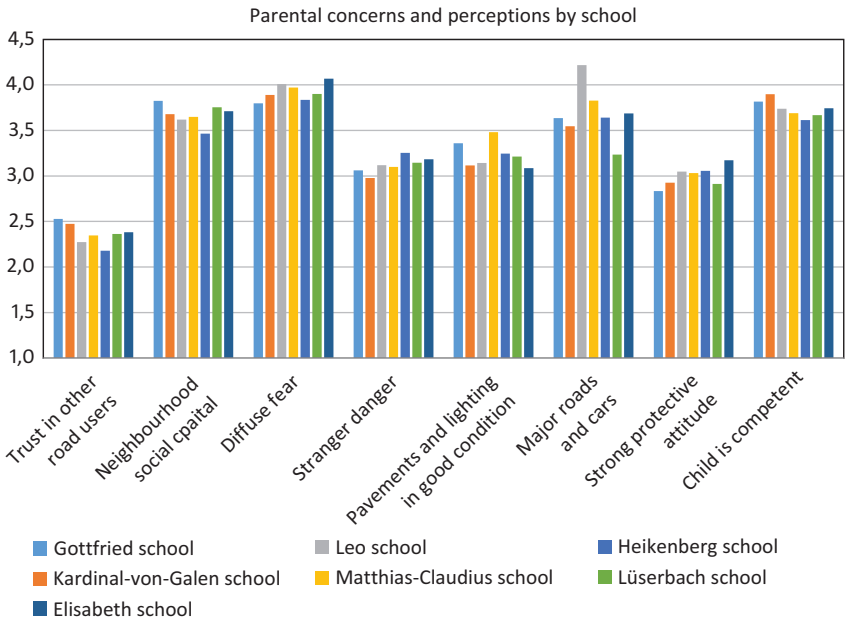


Figure 7.2 Parental concerns and perceptions by school Differences between schools are significant (F-test, $p = 0.05$) for the following variables: trust in other road users; pavements and lighting in good condition; major roads and cars; child is competent.

of trust in the Leo school is likely because the school is located very close to an overly wide main road with a heavy traffic load. The case of the Heikenberg school is less obvious but may be associated with the relatively long trip distances (Scheiner et al. 2019a). Conversely, the good results for the Kardinal-von-Galen school may be due to its location on a road with low traffic levels and good facilities for crossing the street. The school has the highest walk share among all schools (Scheiner et al. 2019a). The Gottfried school is located in a comparatively affluent residential area on the edge of town, which may explain the high level of trust.

The perception that pavements and lighting are in good condition is lowest in the Elisabeth, Kardinal-von-Galen and Leo schools, while it reaches a maximum in the Matthias-Claudius school (and, less so, in the Gottfried school). This is probably due to actual local conditions. For instance, the Elisabeth school is located in Brambauer, one of the more disadvantaged neighbourhoods where the built environment is in less than optimal condition. Conversely, the Matthias-Claudius school is located in a more affluent area, side by side with the Gottfried school, where street spaces are in good condition.

Turning to perceptions of 'major roads and cars', the Leo school stands out with a maximum and the Lüserbach school with a minimum. The Leo school is close to a road with a heavy traffic load, as noted above, and the Lüserbach school is at the end of a dead-end street. Hence, both results are intuitive.

It is somewhat surprising that perceived child competence also differs by school, although the differences are less pronounced. Child age differences should not be the reason. Hence, it is suggested not to dive too deeply into interpretation here.

Regression modelling

The regression results are discussed by target variable, beginning with Model 1 (Table 7.5). The models that include mode use are presented. The models excluding mode use are very similar in terms of the magnitude and significance of coefficients. They are available upon request from the authors.

Model 1 – Major roads and cars: The perception that major roads and densely parked cars characterise the traffic environment on the child's route to school is lower among households of a low educational level than those where a parent has a university degree, but higher among those with a middle-level education. Concerning parental job situation, families with a full-time working mother and a father with no full-time job stand out in terms of a strong perception of a dangerous traffic environment. These observations may be due to segregated places of residence (same for 'other households', i.e. those who are neither couples with children nor lone parents).

Table 7.5 Results of regression modelling

	Model 1: Major roads and cars		**Model 2: Trust in other road users**			**Model 3: Diffuse fear**			
	B	Beta	Sig.	B	Beta	Sig.	B	Beta	Sig.
Intercept	2.48		0.00	2.15		0.00	3.99		0.00
Parental education: university degree (at least one parent) (reference)									
Both less than secondary school level I	**–0.46**	**–0.14**	**0.01**	–0.06	–0.02	0.73	0.08	0.03	0.57
Secondary school level I (at least one parent)	**0.26**	**0.11**	**0.04**	–0.03	–0.02	0.78	0.16	0.08	0.14
Secondary school level II (at least one parent)	0.08	0.03	0.50	0.08	0.04	0.47	0.00	0.00	0.98
Parental job situation									
Father full-time, mother part-time (reference)									
Father full-time, mother full-time	0.16	0.04	0.37	**–0.35**	**–0.11**	**0.04**	0.26	0.09	0.09
Father full-time, mother marginally or unemployed	0.01	0.01	0.91	0.02	0.01	0.83	**–0.18**	**–0.10**	**0.05**
Mother full-time, father not full-time	**0.67**	**0.14**	**0.01**	–0.24	–0.06	0.29	–0.06	–0.02	0.77
Mother not full-time, father not full-time	0.04	0.02	0.81	–0.12	–0.05	0.48	–0.04	–0.02	0.77
Household net equivalent income	–0.05	–0.04	0.55	–0.02	–0.01	0.83	–0.05	–0.04	0.47

(*Continued*)

Table 7.5 (*Continued*)

	Model 1: Major roads and cars		**Model 2: Trust in other road users**			**Model 3: Diffuse fear**			
	B	Beta	Sig.	B	Beta	Sig.	B	Beta	Sig.
Child age (years)	0.01	0.01	0.84	0.00	0.00	0.94	**–0.10**	**–0.16**	**0.00**
Child gender (female)	–0.06	–0.03	0.53	**0.18**	**0.11**	**0.03**	**0.26**	**0.16**	**0.00**
Elder sibling in household	–0.06	–0.03	0.51	0.16	0.09	0.07	–0.02	–0.01	0.77
Household type: couple plus child(ren) (ref.)									
Lone parent	–0.12	–0.04	0.50	–0.22	–0.09	0.19	0.02	0.01	0.88
Other	**–0.95**	**–0.12**	**0.01**	0.45	0.06	0.21	0.11	0.02	0.72
At least one parent w/o German nationality	–0.05	–0.02	0.66	**0.40**	**0.18**	**0.00**	**0.31**	**0.15**	**0.00**
Woodland	**–0.13**	**–0.11**	**0.03**	0.01	0.01	0.80	–0.04	–0.05	0.38
Play streets	**–0.18**	**–0.18**	**0.00**	–0.08	–0.10	0.07	0.02	0.03	0.54
High speed roads	**0.17**	**0.18**	**0.00**	0.07	0.08	0.10	0.04	0.05	0.27
Accident hotspot along the route	**0.42**	**0.21**	**0.00**	0.10	0.06	0.26	–0.01	–0.01	0.89
Gender role attitude: equality	**0.12**	**0.11**	**0.03**	0.02	0.02	0.75	0.06	0.07	0.14
Gender role attitude: conservative roles	**0.08**	**0.09**	**0.05**	–0.02	–0.03	0.52	**0.21**	**0.32**	**0.00**
Active travel to school in week before survey	–0.03	–0.01	0.80	0.17	0.10	0.11	–0.22	–0.14	0.02
Distance to school (km)	**0.21**	**0.31**	**0.00**	–0.03	–0.06	0.41	–0.01	–0.02	0.79
R^2 (adjusted)	23.4			6.8			17.3		

The spatial environment exhibits strong effects. Woodland and play streets along the route reduce parental perceptions of major roads and cars, while high-speed roads and accident hotspots increase them. Distance to school is also associated with a stronger perception of major roads and cars. All effects are intuitive. Interestingly, both dimensions of gender role attitudes are associated with stronger concerns about major roads and cars. While this is easy to understand for conservative roles that are linked to protective attitudes (see Section 'Gender attitudes'), it is less intuitive for gender equality attitudes. A possible interpretation is that strong preferences for gender equality reflect modern understandings of what gender relations should be like and are linked to an equally modern, critical attitude towards car traffic, and thus indirectly linked to the perception of a hostile, urban car traffic environment. In any case, this requires further research.

Model 2 – Trust in other road users: This model has the lowest share of explained variance. Only a few variables exhibit significant influence. Couples with two full-time jobs show less trust in other road users than those living in the more typical arrangement with a full-time employed father and a part-time employed mother. This may be due to the time constraints forcing them to let their child walk home from school even if they feel this is not desirable. This interpretation is supported to some extent by the finding that the same working arrangement is associated with increased diffuse fear, although the effect is not significant ($p = 0.09$). Girls' parents trust other road users more than parents of boys, indicating less fear. Couples that include a foreign parent clearly show increased trust in other road users, which is the model's strongest effect. It is believed that (some of) these parents may originate from countries where reckless driving is more common than in Lünen.

Model 3 – Diffuse fear: This model again includes a significant effect of work-time arrangements. In families where the father is full-time employed but the mother is only marginally employed or has no job, diffuse fear is lower than in the reference category (father full-time and mother part-time employed). This is in line with the above interpretation of decreased trust in other road users among those who have serious time constraints. Girls' parents have higher levels of diffuse fear, and conversely diffuse fear decreases as the child grows older. Both effects are intuitive. Couples that include a foreign parent clearly show increased diffuse fear, which somewhat counters their increased trust in other road users.

Conservative gender role attitudes strongly increase diffuse fear, which underlines the effect of protective attitudes entering this dimension (as outlined above). If a child has used active transport on his/her trip to school before the survey, diffuse fear is reduced. This is again understandable, as these parents have already experienced that their child can walk or cycle to school.

Conclusions

This chapter has presented an analysis of parental concerns concerning their child's trip to school, based on a sample of parents of primary school children in Lünen, Germany. Parental concerns have been identified in previous research as one of the main obstacles that prevent parents from allowing their children to walk or cycle to school independently.

The factors under study that potentially affect parental concerns included various objectively measured dimensions of the transport and built environment, distance and children's mode of use to school, gender role attitudes, and sociodemographics. Three parental concerns were examined in regression modelling: 'major roads and cars', that is the perception that large roads and densely parked cars characterise the child's school route; trust in other road users; and diffuse fear.

The results show that impact factors depend on the focus of concern. The perception of 'major roads and cars' strongly depends on traffic and spatial environment. Play streets and woodlands attenuate it, but intensified by distance to school, high-speed roads and accident hotspots along the route. Trust in other road users is affected significantly only by sociodemographic variables. Diffuse fear varies with the child's age and gender, other sociodemographics and previous experience with active travel to school. Gender role attitudes have been found to affect diffuse fear and the perception of 'major roads and cars'. A conservative gender ideology increases both dimensions of concern – preferences towards gender equity increase diffuse fear. The role of gender ideologies in this respect clearly deserves further research.

Children's school trips emerge as a 'third place' that connects home and school from the parents' perspective, and one which raises serious concerns about the child's safety. On the other hand, research shows that being independently mobile in this 'third place' is important for children's development, the acquisition of neighbourhood knowledge and social skills, and their mental and physical health (Waygood et al. 2017). More research is needed about the character of this 'place' both from the perspective of parents and children, and about the factors that affect parental (or children's) fears.

For policy, the results suggest that a safe transport environment with low vehicle speed that encourages walking, and an urban design that allows short distances to school, may decrease parental concerns about the dominance of car traffic and parked vehicles that restrict children's view. It is important to point out that this would not only be good for child health and development, but also for the parental well-being. A previous paper based on the same data reported that parents' diffuse fear and protective attitudes both increase parental escort (Scheiner et al. 2019a). The same paper also found

that transport planning can significantly improve children's independent travel. While traffic calming reduces parental escort, high-speed roads, narrow pavements, the need to cross zebra crossings and accident hotsports along the route increase parental escort. Hence, both the objective environment and subjective perceptions significantly influence parents' decisions about allowing their children to undertake the journey to school independently.

Acknowledgement

The collection of spatial data used for this chapter was funded by the German Research Foundation (DFG) as part of the project 'Verkehrsinfrastruktur, Raumstruktur und der Weg zur Schule – Fallstudie Lünen (NRW)' (SCHE 1692/7-1).

References

Barker, John. '"Manic Mums" and "Distant Dads"? Gendered geographies of care and the journey to school'. *Health & Place* 17, no. 2 (2011): 413–21. https://doi.org/10.1016/j.healthplace.2010.04.001.

Bennetts, Shannon K., Amamda R. Cooklin, Sharinne Crawford, Fabrizio D'Esposito, Naomi J. Hackworth, Julie Green, Jan Matthews, Lyndall Strazdins, Stephen R. Zubrick, and Jan M. Nicholson. 'What influences parents' fear about children's independent mobility? Evidence from a state-wide survey of Australian parents'. *American Journal of Health Promotion* 32, no. 3 (2018): 667–76.

Clements, Rhonda. 'An investigation into the status of outdoor play'. *Contemporary Issues in Early Childhood* 5, no. 1 (2004): 68–80.

Crawford, Sharinne B., Shannon K. Bennetts, Naomi J. Hackworth, Julie Green, Helen Janine Graesser, Amanda R. Cooklin, Jan Matthews, Lindall Strazdins, Stephen R. Zubrick, Fabrizio D'Esposito, and Jan M. Nicholson. 'Worries, "weirdos", neighborhoods and knowing people: A qualitative study with children and parents regarding children's independent mobility'. *Health and Place* 45 (2017): 131–19.

Foster, Sarah, Lisa Jane Wood, Jacinta Francis, Matthew Knuiman, Karen Villanueva, and Billie Giles-Corti. 'Suspicious minds: Can features of the local neighbourhood ease parents' fears about stranger danger?' *Journal of Environmental Psychology* 42 (2015): 48–56.

Francis, Jacinta, Karen Martin, Lisa Wood, and Sarah Foster. 'I'll be driving you to school for the rest of your life': A qualitative study of parents' fear of stranger danger'. *Journal of Environmental Psychology* 53 (2017): 112–20.

Guliani, Amarpreet, Raktim Mitra, Ron N. Buliung, K. Larsen, and G. E. J. Faulkner. 'Gender-based differences in school travel mode choice behaviour: Examining the relationship between the neighbourhood environment and perceived traffic safety'. *Journal of Transport & Health* 2, no. 4 (2015): 502–11.

Hsu, Hsin-Ping and Jean-Daniel Saphores. 'Impacts of parental gender and attitudes on children's school travel mode and parental chauffeuring behavior: Results for California based on the 2009 National Household Travel Survey'. *Transportation* 41, no. 3 (2014): 543–65.

Jacobs, Jane. *The Death and Life of Great American Cities*. New York: Random House. 1961.
Joelsson, Tanja. 'So that we don't spoil them': Understanding children's everyday mobility through parents' affective practices'. *Children's Geographies* 17, no. 5 (2019): 591–602.
Jorgensen, Lisa J., Gary D. Ellis, and Edward Ruddell. 'Fear perceptions in public parks: Interactions of environmental concealment, the presence of people recreating, and gender'. *Environment and Behavior* 45, no. 7 (2012): 803–20.
Kamruzzaman, Md, Billie Giles-Corti, Jonas De Vos, Frank Witlox, Farjana Shatu, and Gavin Turrell. 'The life and death of residential dissonants in transit-oriented development: A discrete time survival analysis'. *Journal of Transport Geography* 90 (2021): 102921.
Kim, Young-Jea, and Chaman Lee. 'Built and natural environmental correlates of parental safety concerns for children's active travel to school'. *International Journal of Environmental Research and Public Health* 17, no. 2 (2020): 517.
Kroesen, Maarten, Susan Handy, and Caspar Chorus. 'Do attitudes cause behavior or vice versa? An alternative conceptualization of the attitude-behavior relationship in travel behavior modelling'. *Transportation Research Part A* 101 (2017): 190–202.
Kyttä, Marketta, Jukka Hirvonen, Julie Rudner, Liris Pirjola, and Tiina Laatikainen. 'The last free-range children? Children's independent mobility in Finland in the 1990s and 2010s'. *Journal of Transport Geography* 47 (2015): 1–12.
Little, Helen. 'Mothers' beliefs about risk and risk-taking in children's outdoor play'. *Journal of Adventure Education and Outdoor Learning* 15, no. 1 (2015): 24–39.
Lohmüller, Stefan. *Mobilität und Schulweg – Eine empirische Untersuchung an sieben Lüner Grundschulen*. Dortmund: Master thesis, School of Spatial Planning, TU Dortmund University, Dortmund, 2017.
Maruthaveeran, Sreetheran, and Cecil Konijnendijk van den Bosch. 'A socio-ecological exploration of fear of crime in urban green spaces e A systematic review'. *Urban Forestry & Urban Greening* 13, no. 1 (2014): 1–18.
McDonald, Noreen C. 'Is there a gender gap in school travel? An examination of US children and adolescents'. *Journal of Transport Geography* 20 (2012): 80–86.
Mitchell, Hannah, Robin A. Kearns, and Damian C. A. Collin. 'Nuances of neighbourhood: Children's perceptions of the space between home and school in Auckland, New Zealand'. *Geoforum* 38, no. 4 (2007): 614–27.
Mitra, Raktim, Elli M. Papaioannou, and Khandker M. Nurul Habib. 'Past and present of active school transportation: An exploration of the built environment effects in Toronto, Canada from 1986 to 2006'. *Journal of Transport and Land Use* 9, no. 2 (2016): 25–41.
Nikitas, Alexandros, J. Y. T. Wang, C. Knamiller. 'Exploring parental perceptions about school travel and walking school buses: A thematic analysis approach'. *Transportation Research Part A* 124 (2019): 468–87.
O'Connor, Justen, and Alice Brown. 'A qualitative study of "fear" as a regulator of children's independent physical activity in the suburbs'. *Health & Place* 24 (2013): 157–64.
Pooley, Colin G., Jean Turnbull, and Mags Adams. 'The journey to school in Britain since the 1940s: Continuity and change'. *Area* 37, no. 1 (2005): 43–53.
Prezza, Miretta, Francesca Romana-Alparone, Carmela Cristallo, and Luigi Secchiano. 'Parental perception of social risk and of positive potentiality of outdoor autonomy for children: The development of two instruments'. *Journal of Environmental Psychology* 25 (2005): 437–53.
Schendera, Christian F. G. *Regressionsanalyse mit SPSS*. München: Oldenbourg, 2008.
Scheiner, Joachim. 'School trips in Germany: Gendered escorting practices'. *Transportation Research Part A* 94 (2016): 76–92.

Scheiner, Joachim, Oliver Huber, and Stefan Lohmüller. 'Children's independent travel to and from primary school: Evidence from a suburban town in Germany'. *Transportation Research Part A* 120 (2019a): 116–31.

Scheiner, Joachim, Oliver Huber, and Stefan Lohmüller. 'Children's mode choice for trips to primary school: A case study in German suburbia'. *Travel Behaviour & Society* 15 (2019b): 15–27.

Schoeppe, Stephanie, Mitch J. Duncan, Hannah M. Badland, Amanda L. Rebar, and Corneel Vandelanotte. 'Too far from home? Adult attitudes on children's independent mobility range'. *Children's Geographies* 14, no. 4 (2015): 482–89.

Schoeppe, Stephanie, Paul Tranter, Mitch J. Duncan, Carey Curtis, Alison Carver, and Karen Malone. 'Australian children's independent mobility levels: Secondary analyses of cross-sectional data between 1991 and 2012'. *Children's Geographies* 14, no. 4 (2016): 408–21.

Seraj, Saamiya. *Parental Attitudes toward Children Walking and Bicycling to School*. Austin: Master Thesis presented to the Faculty of the Graduate School of The University of Texas at Austin, 2011.

Seraj, Saamiya, Raghuprasad Sidharthan, Chandra Bhat, Ram Pendyala, and Konstadinos Goulias. 'Parental attitudes toward children walking and bicycling to school'. *Transportation Research Record* 2323 (2012): 46–55.

Shaw, Ben, Ben Fagan-Watson, Björn Frauendienst, Andreas Redecker, Tim Jones, and Mayer Hillman. *Children's Independent Mobility: A Comparative Study in England and Germany (1971–2010)*. London: University of Westminster, Oxford Brookes University, Ruhr Universität Bochum. 2013.

Timperio, Anna, David Crawford, Amanda Telford, and Jo Salmon. 'Perceptions about the local neighborhood and walking and cycling among children'. *Preventive Medicine* 38, no. 1 (2004): 39–47.

Valentine, Gill, and John McKendrick. 'Children's outdoor play: Exploring parental concerns about children's safety and the changing nature of childhood'. *Geoforum* 28, no. 2 (1997): 219–35.

van den Berg, Pauline, E. O. D. Waygood, Iris van de Craats, and Astrid Kemperman. 'Factors affecting parental safety perception, satisfaction with school travel and mood in primary school children in the Netherlands'. *Journal of Transport & Health* 16 (2020): 100837.

Villanueva, Karen, Billie Giles-Corti, Max Bulsara, Anna Timperio, Gavin McCormack, Bridget Beesley, Georgina Trapp, and Nicholas Middleton. 'Where do children travel to and what local opportunities are available? The relationship between neighborhood destinations and children's independent mobility'. *Environment and Behavior* 45, no. 6 (2013): 679–705.

Visser, Kirsten, Gideon Bolt, and Ronald van Kempen. 'A good place to raise your children? The diversity of parents' neighbourhood perceptions and parenting practices in a low-income, multi-ethnic neighbourhood: A case study in Rotterdam'. *Geoforum* 64 (2015): 112–20.

Vlaar, Janae, Mariana Brussoni, Ian Janssen, and Louise C. Masse. 'Roaming the neighbourhood: Influences of independent mobility parenting practices and parental perceived environment on children's territorial range'. *International Journal of Environmental Research and Public Health* 16, no. 17 (2019): 3129.

Waygood, Edward Owen D., Margareta Friman, Lars E. Olsson, and Ayako Taniguchi. 'Transport and child well-being: An integrative review'. *Travel Behaviour & Society* 9 (2017): 32–49.

Waygood, Edward Owen, and Yusak O. Susilo. 'Walking to school in Scotland: Do perceptions of neighbourhood quality matter?' *IATSS Research* 38, no. 2 (2015): 125–29.

Westman, Jessica, Margareta Friman, and Lars E. Olsson. 'What drives them to drive? Parents' reasons for choosing the car to take their children to school'. *Frontiers in Psychology* 8 (NOV) (2017): 1970.

Wilson, Katherine, Andrew F. Clark, and Jason A. Gilliland. 'Understanding child and parent perceptions of barriers influencing children's active school travel'. *BMC Public Health* 18, no. 1 (2018): 1053.

Woolley, Helen, and Elizabeth Griffin. 'Decreasing experiences of home range, outdoor spaces, activities and companions: Changes across three generations in Sheffield in north England'. *Children's Geographies* 13, no. 6 (2015): 677–91.

Zubrick, Stephen R., Lisa Jane Wood, Karen Villanueva, Georgina Wood, Billie Giles-Corti, Hayley Christian. *Nothing but Fear Itself: Parental Fear as a Determinant Impacting on Child Physical Activity and Independent Mobility*. Victorian Health Promotion Foundation, 2010. https://pdfs.semanticscholar.org/fe8e/cb16bfa6250fe465f86266334fd23e0812a4.pdf.

Zuniga, Kelley D. 'From barrier elimination to barrier negotiation: A qualitative study of parents' attitudes about active travel for elementary school trips'. *Transport Policy* 20 (2012): 75–81.

Chapter 8

HOW DOES FAMILIES' DAILY MOBILITY BETWEEN HOME AND SCHOOL CHANGE WITH THE TROTTIBUS, A WALKING SCHOOL BUS PROGRAM IN QUEBEC, CANADA?

Marie-Soleil Cloutier, Sylvanie Godillon and Johanne Charbonneau
Institut National de la Recherche Scientifique, Québec, Canada

Introduction

The journey from home to school is one of the most frequent commutes in kids' life, starting as soon as four years old in many countries. Accordingly, much research has been done in the past decades, addressing various dimensions of these journeys, from pedestrian injuries, to the preferred mode of transportation and their related physical (in)activity, to pollution exposure on the way. Using a case study in Québec, a province of Canada, this chapter aims to better understand the impacts of an active transportation initiative – the Canadian Cancer Society's (CCS) walking school bus (WSB) programme on families' daily mobility. The chapter is divided in four parts. The first two look at the literature on the decline of active transportation to school and initiatives to reverse it, including WSB programmes around the western world. The third part presents the results from the case study, while the last section briefly introduces a few insights related to this significant topic: the journey to school as a third space.

The Decline of Active Transportation to School

Although the potential benefits associated with using non-motorised modes of transportation for travel to and from school, walking to school has declined since the 1970s, especially in western countries. In the United States,

from 1969 to 2009, the percentage of trips walked or biked to school dropped from 41% to 13% according to the National Personal Transportation Survey data (McDonald et al. 2011). In Toronto, the most populated city in Canada, the walking mode share for school trips declined from 53% to 43% between 1986 and 2006 for children between 11 and 13 years (Buliung et al. 2009). Similar trends were observed in Sydney, Australia, where 58% of younger children (5–9 years old) walked to school in 1971, a proportion reduced to 26% in the 1999–2003 Household Travel Survey (van der Ploeg et al. 2008). More recently, a study in four European territories (Czech Republic, Norway, Scotland and Wales) found stable rates of active transport (walking, biking) to school between 2006 and 2018, a reassuring trend despite variations between countries (55% to 30% on average) (Haug et al. 2021).

A recent literature review of factors related to the change in active school transportation illustrates the complexity of the topic by presenting three layers of influence when it comes to walking or biking to school: individuals (children and parents), social environment and built environment (Rothman et al. 2018). According to this review and other authors, distance to school was one of the variables most strongly associated with active transportation to school, leaving the car the 'only' option to take children to school (Mackett 2013; Omura et al. 2019). However, even for children close enough to walk, a supportive built environment is not enough to convince parents to let their children walk/bike to school (Ahlport et al. 2006; Sirard and Slater 2008). For example, in surveys that required parents to identify the reasons they chose to drive their children to school, practical reasons are cited by respondents (McDonald and Aalborg 2009; Fyhri et al. 2011). Using a car is more convenient because of the constraints of daily life, inflexible work schedules or because family members have to travel to different destinations. While school officials deplore the fact that more and more parents drive their children to school in the morning, which increases car congestion around schools, it is scarce for these parents to drive their children to school and then return home simply: driving to school is one stop on their morning trip (Mackett et al. 2005). Similarly, a study in Montréal and Trois-Rivières (Québec, Canada) based on a survey of 1,495 parents demonstrates that a higher proportion of children walk to school when parents are walking (80% of children) or biking (90%) to go to work compare to when parents are driving to work (30% of children) (Lewis and Torres 2010).

Confronted with this decrease in active transport to school, various initiatives have emerged to reverse this trend. In the United States, the Safe Routes to School organisation focuses its activities on teaching safe pedestrian travel (education), increasing police control (enforcement) and improving the efficiency of the road infrastructure (engineering) between schools and adjacent neighbourhoods. Various authors evaluating the effect of such projects

found that children were walking and biking more, but the improvement in action transportation varied a lot between studies (Boarnet et al. 2005; Chillón et al. 2011; Davison et al. 2008; Orenstein et al. 2007). Similar initiatives are taking place in Canada, where various Active and Safe Route to School organisations exist at the provincial level, with activities such as the making of 'school travel plans' helping local communities choose the best path to 'channel' children, prioritising interventions and advocating for better infrastructures on the way to school. However, reviews of these initiatives conclude that few effectively address issues of parental convenience and time constraints (McDonald and Aalborg 2009; Stewart et al. 2012).

The Walking School Bus: A Different Commute to School

The WSB represent a particular initiative to encourage walking to school (Kearns et al. 2003). It allows children to be accompanied, on foot, to their school for the morning commute. Routes are set up so that schoolchildren can use them according to specific stops and schedules, under the supervision of an adult. In most cases, volunteer parents run the WSBs at each school, but other types of programme management exist: through the school transportation committee, under the crossing guard's supervision, by paid staff, and so on. Also, other volunteers can be involved in walking with kids, such as retirees or members of community organisations. This programme was first introduced in Denmark in 1976 (McDonald and Aalborg 2009), and there are currently several hundred WSBs in Europe (Belgium, Switzerland, France, Spain, Italy, United Kingdom) and around the world (United States, Canada, Australia).

Walk-to-school programmes, including WSB, have several public health objectives. First, they aim to integrate daily physical activity that benefits health and contributes to the fight against obesity. They also reduce road traffic around schools, which lowers the risk of road injuries and the primary source of pollution and addresses the parent's safety concerns. Another benefit is related to the learning opportunities they create through experience, helping children be more independent and reassuring parents about their capacity to walk alone at some point. Finally, they provide an opportunity for children and parents in the same neighbourhood to socialise. The anticipated benefits are clearly positive: safety due to the reduction in the number of cars around schools, relief for parents who no longer have to take care of the morning commute every day, and a positive contribution to the environment by reducing local sources of pollution.

In Canada, several organisations promote the WSB concept, including the CCS and its Quebec provincial branch, who has been supporting the gradual implementation of the Trottibus – the French term for WSB – since 2014.

It is a specific WSB programme that takes place in the morning, only in elementary schools and is based on volunteer parents to manage the programme and walk with children, although it is open to other members of the community who would like to volunteer. CCS-Québec provides training and 'start-up kits' to interested school communities and follows them during the first two years of implementation. One hundred and fifty schools across the Quebec province registered in this programme between 2014 and 2017, and there still are as many.

The effects of walking school bus on modal shift, physical activity and safety

In the past decade, WSB initiatives have been evaluated in different contexts to determine conditions necessary for their success and impacts of their implementation. Different studies have identified numerous impacts of WSBs, the most significant of which appear to be a shift in school travel mode and a change in children's physical activity levels (Jones et al. 2019; Mackett et al. 2005; Mendoza et al. 2011; Sayers et al. 2012; Sirard et al. 2008; Smith et al. 2015). For example, a case–control study in three schools during two years found that the proportion of children walking to school and the daily physical activity was higher in the intervention school (with WSB) than in the control school (Heelan et al. 2009). Other studies have focused on the effect of WSB on social outcomes such as better children's independent mobility (Depeau 2008; Kingham and Ussher 2007) and increasing social interactions and collective actions between neighbours (parents and children) (Kearns et al. 2003; Pigalle 2019). Finally, research found effects on road safety perception and families' daily mobility organisation (Kong et al. 2009; Nikitas et al. 2019). For instance, parents involved in a pilot project with a paid staff to implement a WSB programme in one school in Cordoba, Spain, said that their children's participation allowed them more free time and less complicated transport routine (Pérez-Martín et al. 2018).

Case Study: Effect of the Trottibus Programme on Families' Daily Mobility

Following the above section, few of the cited evaluations assess how WSBs potentially affects the mobility behaviour of all family members. Such programmes allow children to develop healthy lifestyles by including walking as a routine in daily activities. Moreover, this programme may inspire the whole family to adopt active transportation in their daily lives: children's implications might be perceived as a prompting event that can impact other areas of family life. Could a WSB programme possibly result in a similar

modal shift for parents? How do children and their parents view the effects of this programme (or lack thereof) on their daily mobility? This is explored here through studying the specific Trottibus programme in Québec, Canada.

Data collection and methods

Data were collected in two different ways: (a) a web survey completed by parents and children both when they first started using the Trottibus (Time 1) and six months later (Time 2); and (b) interviews with 22 parents who had previously completed the web survey.

The online questionnaire consisted of different themes divided into two parts. The first part was completed by the parents and the second by the children, with their parent's help if necessary. Both parts had similar questions, but the phrasing and possible answers were different for children to ensure they understood the information and were able to answer. Table 8.1 presents the themes and subthemes in the web questionnaire. The response time was about ten minutes per section (parent and child). The questionnaire was built using Survey Monkey software to make it readily available on the Internet. The web survey was conducted with two cohorts of families.

Table 8.1 Online questionnaire themes

Theme	Sub-theme	# of questions
Respondent identification	Code to match Time 1 and 2 respondents, email	3
Individual and family characteristics	Sex, education, number of children + age	3
Family travel patterns	Vehicle ownership, frequency for each mode of transportation	3
Trottibus participation	Who, when, where, why, volunteering	6
Child travel patterns	Age, sex, frequency for each mode of transportation	5
Perceptions of walking to school	Motivations, sources of physical activities, benefits and barriers	3
Perceptions of the neighbourhood	Postal code, risk perceptions on the way to school	4
Children's part	Age, grade, perception of the Trottibus, sources of physical activities, risk perceptions on the way to school	5

Source: Based on Cloutier et al. (2018).

Participants completed a first questionnaire (Time 1: right before or at the beginning of the Trottibus programme) in Spring 2016 (Cohort 1) or Fall 2017 (Cohort 2). The link to the questionnaire was sent by email to all parents with at least one child newly enrolled in the Trottibus programme, based on the CCS-Québec weekly list of new registrants. Six months later, the respondents from Time 1 were contacted again and invited to complete a second questionnaire with the same content (Time 2). Once the data file from the Survey Monkey platform was exported and cleaned, both cohorts were merged in order to carry out descriptive statistical analyses and chi-squared tests comparing Time 1 and Time 2.

Web survey participants were invited to provide their contact details if they wanted to participate in a follow-up interview, allowing a more in-depth assessment of their experience with the Trottibus. A few weeks after the web survey, the research team identified parents who agreed to be contacted and whose children had started using the Trottibus. The objective of the interviews was to document the following aspects in more detail: families' Trottibus experience (and reasons they stopped using the Trottibus, if applicable), their daily mobility habits, their perception of active transportation and their perception of risks in the environment. A total of 22 parents were interviewed in 2017. Interviews lasted an average of 36 minutes, with the longest being 80 minutes and the shortest (by phone) being 16 minutes.

Figure 8.1 illustrates the number of respondents for each phase of the data collection. Altogether, the response rate for questionnaires was 25%,

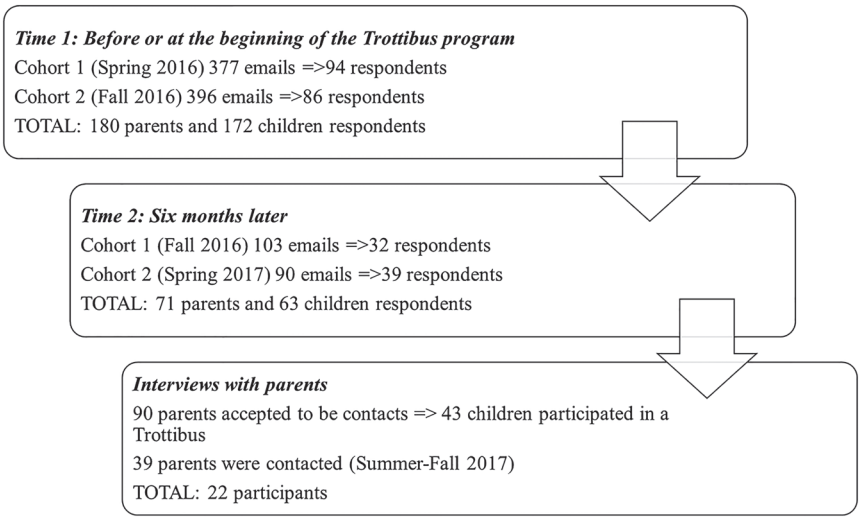


Figure 8.1 Summary of the data collection

which is lower than the usual response rates for conventional questionnaires, which range from 30% to 40% (Sabourin et al. 2005). There is no consensus in the literature on the quality of response rates for online questionnaires but response rates are reportedly lower than face-to-face or telephone surveys, which is the case here.

Description of the Collected Sample

As Table 8.2 shows, the majority of parent respondents were women with a higher education (68% with a university degree), a proportion even higher for interviews (19/22). The average number of children per family was 1.9, with half of the families having two children in the survey and a third in the interviews. Respondents live in various environments with almost half of them located in suburbs, according to their school's location. The heterogeneity of the interview sample on this variable is also interesting with participants in all three categories (Table 8.2). Child respondents ($n = 172$ for Time 1 and 63 for Time 2) included as many girls (55%) as boys (45%) who were an average of 7 years old.

Children and the Trottibus: a significant increase in walking to school and a positive experience

At Time 1, as shown in Figure 8.2, 42% of children went to school in the morning using individual cars and 37% were already walking. The use of active transportation to get to school is significantly higher in urban areas where distances between home and school are the shortest. In fact, 63% of parents quoted the short distance as a reason to travel to school using active transportation. Other reasons cited were health (66% of parents),

Table 8.2 Respondent profiles for parents

	Web Survey ($N = 180$ for Time 1 and $N = 71$ for Time 2)	**Interviews ($N = 22$)**
Gender	90% of women	19/22 woman
Education	68% with university degree	19/22 with university degree
Number of children in the family	22%: one child 48%: two children	12/22: one child 8/22: two children
Where do they live	33% in largest cities 46% in suburbs 19% in small towns	11/22 in largest cities 8/22 in suburbs 3/22 in small towns

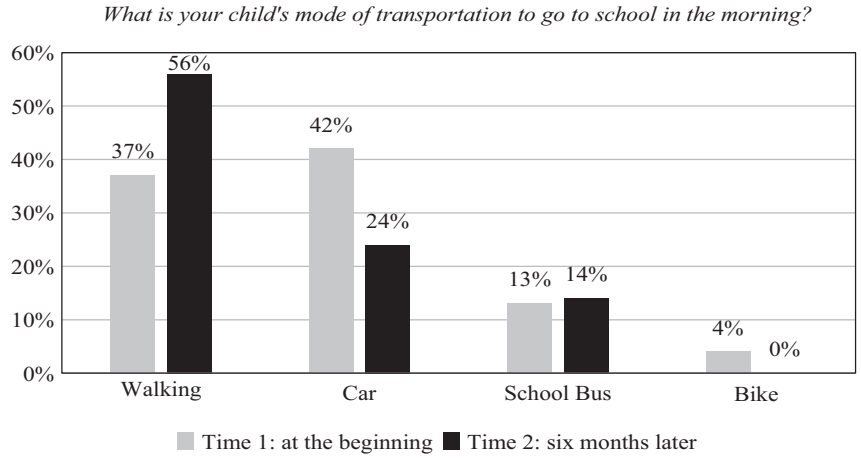


Figure 8.2 Transportation mode for morning travel to school: children (web survey, parents $N = 180$ for Time 1 and $N = 71$ for Time 2)

enjoyment (31%) and a desire to reduce car use (29%). When asked about the reasons for using the car to go to school, 70% of parents responded that their child was too young to go to school using active transportation and 40% of them answered that they could not accompany him. In addition, a quarter of parents mentioned fear of assault or road injuries as reasons for using motorised transportation to get their children to school. At Time 2 – six months after beginning to use the Trottibus – the proportion of children walking in the morning rose to 56%. For the morning journey, the proportion of children accompanied by other children and adults also increased significantly. There was a decrease in the share of accompanied children without other children, as well as the share of children walking to school alone, probably due to Trottibus groups. The proportion of children walking in the evening rose from 38% to 42%, but this slight increase was not statistically significant.

It seems that the objectives of the Trottibus are intertwined with family values and the Trottibus essentially becomes a way to put these into practice. As such, the WSB programme meets parents' expectations in terms of physical activity and environment. In fact, interviews revealed that walking was already a family value that had been passed on to children:

> We have always said that: it's good for your health, the more exercise you get, the better. Walking is a chance to get some fresh air, and it feels good. When we exercise, we have more energy. When you're at school, you can't move around. But, if you get some exercise when you're outside of school, it's easier to sit still and learn. Exercise is part of what is important to us and that we instil in our children. (mother H, suburb of Quebec City)

> It's better when she walks, it pollutes less. If we try to transmit good values to our children, values of 'we walk, we bike' and then, every morning we are in the car, it doesn't make sense. We compost, we recycle, all that stuff, we do it. (mother K, Montreal)

Accordingly, the majority of parents interviewed said that walking and active transportation were habits that were already part of their family values. A few respondents even mentioned that the value associated with active transportation was already well established in their children:

> He's an active little boy. We have always walked a lot with him, so it doesn't require much effort for him to do so, it's just normal. Sometimes, if it's a rainy day and I pick him up in my car on my way back from work, he gets annoyed. Walking is just part of his daily life. (mother A, Montreal)

Walking was viewed positively by children both at Time 1 and Time 2: 73% of the children reported that they enjoyed walking to school *a lot* and 23% (Time 1) and 24% (Time 2) enjoyed it *a little*. A minority of children did not enjoy walking to school (4%). As for the positive experience in the programme, 63% of the children at Time 2 answered 'yes' when asked if they like to be part of the Trottibus and main reasons mentioned were 'to be with my friends' (40%), 'it's better for my health' (24%) and 'to walk with my mom/dad' (13%). Being with and making new friends was also brought by parents during the interviews:

> If they have friends, that's very good. If they have friends who are going walking with them in the Trottibus, that's a big encouragement that works well, then they want to participate, and they are on time to catch it. (father E, Montreal)

> She didn't know any children before she started. She was able to meet friends on the Trottibus who attend her class or who go to her school. It allows you to build relationships. (mother G, suburb of Quebec City)

Parents and the Trottibus: no quantifiable modal shift and the need for the flexibility of the car

As Figure 8.3 shows, walking did not increase between the two survey periods for parents: less than 20% of respondents walked 3 days or more in a typical week at Time 1, a proportion even lower at Time 2 (10%). To the opposite, almost 60% of parents used the car five or more days a week at Time 1, and this percentage even increased to 65% at Time 2.

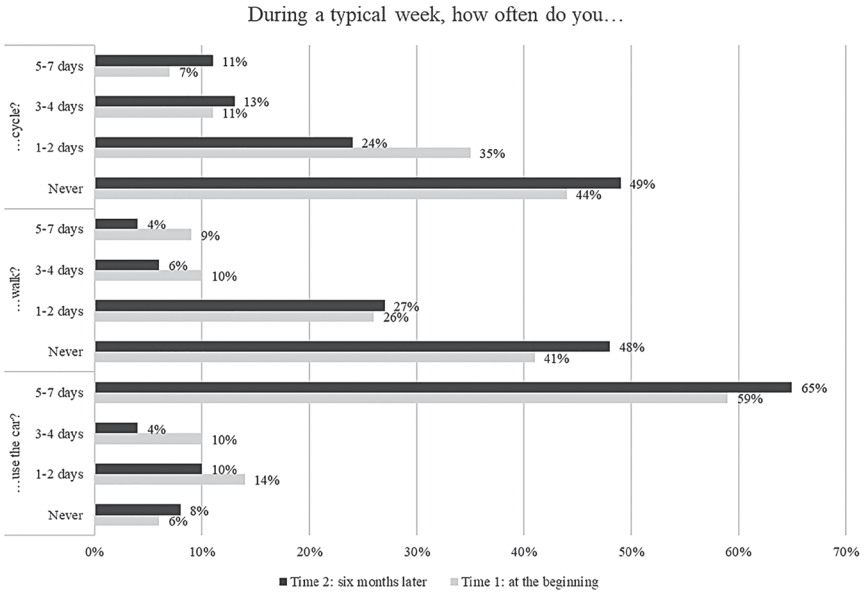


Figure 8.3 Transportation mode used by parents (N = 180 for Time 1 and N = 71 for Time 2)

This result is not surprising since the Trottibus only offers an alternative way to go to school in the morning. School is a frequent destination, but not the only one a family goes to. Accordingly, the interviews showed the importance of the car in families' daily mobility. First, using the car to travel to work was justified in three different ways by respondents: (a) family members travelled together in the same vehicle, (b) some of them had jobs that required several trips during the day, and which therefore required a vehicle and (c) some parents had no other transport modes possibilities. For example, the area where they lived or worked was not well served by public transportation or their place of employment was too far from home to walk or bike:

> The car is mainly for work, because it takes three times longer using public transportation. It's either 15 minutes by car or 45 minutes using public transportation (mother C, Montreal).

Aside from work, the parents interviewed also explained how they travel for regular purchases (food, pharmacy, shopping, etc.). Only four respondents reported that they mainly shop on foot, close to their residence. Most had to travel by car to shop, especially for groceries, as there were no supermarkets nearby. Many respondents complained that they could not shop closer to home and that local stores did not meet their needs:

> I go to my regular grocery store by car because it's far away and I usually bring home ten bags or so […] Costco, the bigger grocery store, and Canadian Tire are all places I go to by car. The convenience store, Jean Coutu, the bagel store, the little things, that's done on foot. (mother J, Montreal)

In addition to work and shopping, half of the parents mentioned that they had access to recreational facilities and parks in their neighbourhood where they could walk or bike with their children. Despite this proximity for some, one-quarter of respondents used the car on weekends to travel to outdoor recreational activities, mostly for convenience reasons. Respondents who lived in Montreal usually used public transit when they had to travel downtown with their families since the subway is efficient to go to this area of the city:

> The mode of transportation always depends on the outings. If we go to Laval, the South Shore, we take the car because it's easier. But, if it's on the Island of Montreal, we either walk, hop on the bus or take the subway. (mother K, Montreal)

Other benefits for participating families: easy morning routine, socialisation and independent mobility

Parents did not change their mode of transportation for various reasons, reminding us that other types of interventions are required to reduce car use effectively. The interviews show that switching from motorised transport to walking is particularly beneficial for families for whom motorised transport was initially perceived as the simplest solution in a context where family and professional schedules are often complex. Parents claimed that they participated in the Trottibus to *make life easier*, to establish a better morning routine and reduce conflicts with children about departure times and choice of transport mode:

> It also forces us to have more of a schedule, to tell the children 'The Trottibus comes at 25 past, you have to finish your lunch, otherwise you'll miss it.' It works more or less, but at least it imposes a routine on us. (father B, Montreal)

Furthermore, the Trottibus results in some physical activity and more socialisation with other parents, which is particularly important for home parents or new arrivals in the neighbourhood:

> I realise that I am in a state of mind or preparation to start my day, which is very different when I get fresh air, especially after the winter. You really feel awake. It prepares the day differently when we walk with the Trottibus. (mother M, Montreal)

> We had moved from Montreal and I thought to myself: "I don't know anyone." Now, my son always tells me: "Mom, you know so many people, it's crazy!' Of course, we now know everyone in the neighbourhood. (mother G, a suburb of Quebec City).
>
> It's fun to chat with other parents. Generally, we do not see each other, the parents, it is rare! I have a neighbour who did the Trottibus with whom I had never spoken. I knew she lived there, I knew she had children in school, but we had never talked before. (mother K, Montreal)

Finally, an unexpected benefit for parents is the children's willingness to continue walking alone or with friends outside the Trottibus, combined with the confidence parents have on their ability to do it safely, because of their walking experience. For more on this specific part of the project, see Godillon and Cloutier (2018):

> I think the day she's going to tell me, I don't want to go on the Trottibus anymore, I'm going to start letting her go, first with her brother (…). (mother A, Montreal)
>
> The oldest is in 4th grade, she will start going to school on her own. So I don't think they will necessarily participate in the Trottibus, rather she will leave at the same time as me, then they will go to school on their own. (mother F, Quebec city)
>
> The children, even after the Trottibus, they continue to walk together. It gives another security, even if there are no adults, the fact that there is more than one child, I find it safer. (mother K, Montreal)
>
> It is indeed a good way to make the transition and then to make them more responsible. Now, I know that when they arrive at a stop sign, for example, they stop and they look to the left, to the right, and if there is no danger, now they can cross. (father N, Quebec city)

Discussion

WSB programmes represent a piece of the family mobility puzzle: they help switch children from being driven to walking, addressing some of the parental constraints. As Tudor-Locke et al. (2001) said 'The promotion of active commuting to school must be considered in the context of parents' real and perceived concerns for their children's personal and pedestrian safety'. When parents chose to drive their children to school, the reasons most frequently cited are practical ones: work schedules, numerous destinations, and so on (Fyhri et al. 2011; Mackett 2013; Reimers et al. 2013). Even when children prefer to walk, family constraints remain a priority (Davison et al. 2008; Henne et al. 2014).

We already know that children's travel needs are different from those of adults both for their own well-being and for their future transportation behaviour and decisions (Waygood et al. 2019). However, school policies, urban planning decisions and parental preferences led to an increase in the distance between home and school (Torres and Lewis 2010), which is associated with higher levels of passive transport (Dessing et al. 2014; Sirard and Slater 2008). Offering new mobility options on the way to school might lead to different parental decisions. WSB programmes prove to be effective, in part because it takes parental constraints and children's preferences into account (Pérez-Martín et al. 2018), but they need institutional support, either from schools, transport agencies or neighbourhood community services to operate in the long run (McDonald and Aalborg 2009).

This chapter contributes to a better understanding of the levers and barriers to changing family mobility on the way to school by demonstrating a modal shift following the implementation of a WSB programme. Our results are consistent with previous work on the increase of active transportation to school. It also adds depth to why the WSB project has more benefits than just the physical activity intake, in terms of walking experience, risk perception and social connections in the neighbourhood. Such results are also in line with the view of the school journey as a third space: the route between home and school is a territory where families have various experiences every day, contributing to the building and strengthening of this third space.

References

Ahlport, Kathryn N., Laura Linnan, Amber Vaughn, Kelly R. Evenson and Dianne S. Ward. 'Barriers to and facilitators of walking and bicycling to school: Formative results from the Non-Motorized Travel Study'. *Health Education & Behavior* 35, no. 2 (August 2006): 221–44.

Boarnet, Marlon G., Craig L. Anderson, Kristen Day, Tracy McMillan and Mariela Alfonzo. 'Evaluation of the California safe routes to school legislation: Urban form changes and children's active transportation to school'. *American Journal of Preventive Medicine* 28, no. 2, suppl. 2 (February 2005): 134–40.

Buliung, Ron N., Raktim Mitra and Guy Faulkner. 'Active school transportation in the Greater Toronto Area, Canada: An exploration of trends in space and time (1986–2006)'. *Preventive Medicine* 48, no. 6 (June 2009): 507–12.

Chillón, Palma, Kelly R. Evenson, Amber Vaughn and Dianne S. Ward. 'A systematic review of interventions for promoting active transportation to school'. *International Journal of Behavioral Nutrition and Physical Activity* 8, no. 1 (February 2011): 10.

Cloutier, Marie-Soleil, Johanne Charbonneau, Sylvanie Godillon and André Thouin. 'Évaluation du programme Trottibus au Québec'. Montréal, Institut National de la Recherche Scientifique-Centre Urbanisation Culture Société, 2018.

Davison, Kirsten K., Jessica L. Werder and Catherine T. Lawson. 'Children's active commuting to school: Current knowledge and future directions'. *Preventing Chronic Disease* 5, no. 3 (July 2008).

Depeau, Sandrine. 'Nouvelles façons de se déplacer vers l'école ou l'expérimentation du pédibus dans un quartier rennais. Quelles incidences sur l'apprentissage de l'autonomie de déplacement des enfants et leurs rapports à l'espace'. *RTS – Recherche Transports Sécurité* 101 (2008): 253–71.

Dessing, Dirk, Sanne I. de Vries, Jamie M. A. Graham and Frank H. Pierik. 'Active transport between home and school assessed with GPS: A cross-sectional study among Dutch elementary school children'. *BMC Public Health* 14, no. 1 (March 2014): 227.

Fyhri, Aslak, Randi Hjorthol, Roger L. Mackett, Trine Nordgaard Fotel and Marketta Kytta. 'Children's active travel and independent mobility in four countries: Development, social contributing trends and measures'. *Transport Policy* 18, no. 5 (September 2011): 703–10.

Godillon, Sylvanie and Marie-Soleil Cloutier. 'Sur le chemin de l'école : perceptions de parents et d'enfants du primaire face au risque routier lors de la mise en place d'un Trottibus au Québec'. *Enfances Familles Générations* 30 (2018).

Haug, Ellen, Otto Robert Frans Smith, Jens Bucksch, Catherina Brindley, Jan Pavelka, Zdenek Hamrik, Joanna Inchley, Chris Roberts, Frida Kathrine Sofie Mathisen and Dagmar Sigmundová. '12-Year trends in active school transport across four European countries-findings from the Health Behaviour in School-Aged Children (HBSC) study'. *International Journal of Environmental Research and Public Health* 18, no. 4 (February 2021): 2118.

Heelan, Kate A., Bryce M. Abbey, Joseph E. Donnelly, Matthew S. Mayo and Gregory J. Welk. 'Evaluation of a walking school bus for promoting physical activity in youth'. *Journal of Physical Activity and Health* 6, no. 5 (2009): 560–67.

Henne, Heather M., Pooja S. Tandon, Larry D. Frank and Brian E. Salens. 'Parental factors in children's active transport to school'. *Public Health* 128, no. 7 (July 2014): 643–46.

Jones, Rebecca A., Nicole E. Blackburn, Catherine Woods, Molly Byrne, Femke van Nassau and Mark A. Tully. 'Interventions promoting active transport to school in children: A systematic review and meta-analysis'. *Preventive Medicine* 123 (June 2019): 232–41.

Kearns, Robin A., Damian Collins and Patricia M. Neuwelt. 'The walking school bus: Extending children's geographies?' *Area* 35, no. 3 (August 2003): 285–92.

Kingham, Simon and Shannon Ussher. 'An assessment of the benefits of the walking school bus in Christchurch, New Zealand'. *Transportation Research Part A: Policy and Practice* 41, no. 6 (July 2007): 502–10.

Kong, Alberta S., Andrew L. Sussman, Sylvia Negrete, Nissa Patterson, Rachel Mittleman and Richard Hough. 'Implementation of a walking school bus: Lessons learned*'. *Journal of School Health* 79, no. 7 (July 2009): 319–25.

Lewis, Paul and Juan Torres. 'Les parents et les déplacements entre la maison et l'école primaire: quelle place pour l'enfant dans la ville?' *Enfances, Familles, Générations* no. 12 (September 2010): 44–64.

Mackett, Roger L. 'Children's travel behaviour and its health implications'. *Transport Policy* 26 (March 2013): 66–72.

Mackett, Roger L., Lindsey Lucas, James Paskins and Jill Turbin. 'Walking buses in Hertfordshire: Impacts and lessons. Centre for Transport Studies', University College London, 2005.

McDonald, Noreen C. and Annette E. Aalborg. 'Why parents drive children to school: Implications for safe routes to school programs'. *Journal of the American Planning Association* 75 no. 3 (2009): 331–42.

McDonald, Noreen C., Austin L. Brown, Lauren M. Marchetti and Margo S. Pedroso. 'U.S. school travel, 2009: An assessment of trends'. *American Journal of Preventive Medicine* 41, no. 2 (August 2011): 146–51.

Mendoza, Jason A., Kathy Watson, Tom Baranowski, Theresa Nicklas, Doris K. Uscanga and Marcus J. Hanfling. 'The walking school bus and children's physical activity: A pilot randomized controlled trial'. *Pediatrics* 128, no. 3 (September 2011): e537–44.

Nikitas, Alexandros, Judith Y. T. Wang and Cathy Knamiller. 'Exploring parental perceptions about school travel and walking school buses: A thematic analysis approach'. *Transportation Research Part A: Policy and Practice* 124 (June 2019): 468–87.

Omura, John D., Eric T. Hyde, Kathleen B. Watson, Sarah A. Sliwa, Janet E. Fulton and Susan A. Carlson. 'Prevalence of children walking to school and related barriers – United States, 2017'. *Preventive Medicine* 118 (January 2019): 191–95.

Orenstein, Marla R., Nicolas Gutierrez, Thomas M. Rice, Jill F. Cooper and David R. Ragland (2007). 'Safe Routes to School Safety and Mobility Analysis'. California Department of Transportation. 2007.

Pérez-Martín, Pablo, Gerado Pedrós, Pedro Martínez-Jiménez and Marta Varo-Martínez. 'Evaluation of a walking school bus service as an intervention for a modal shift at a primary school in Spain'. *Transport Policy* 64 (May 2018): 1–9.

Pigalle, Éléonore. 'Déplacements en Pédibus à l'épreuve des modes d'habiter'. *Espaces et sociétés* 179, no. 4 (2019): 93–110.

Reimers, Anne K., Darko Jekauc, Eliane Peterhans, Matthias O. Wagne and Alexander Woll. 'Prevalence and socio-demographic correlates of active commuting to school in a nationwide representative sample of German adolescents'. *Preventive Medicine* 56, no. 1 (January 2013): 64–69.

Rothman, Linda, Alison K. Macpherson, Timothy Ross and Ron N. Buliung. 'The decline in active school transportation (AST): A systematic review of the factors related to AST and changes in school transport over time in North America'. *Preventive Medicine* 111 (June 2018): 314–22.

Sabourin, Stéphane, Pierre Valois and Yvan Lussier. 2005. 'L'utilisation des questionnaires en recherche' In *Recherche psychosociale: pour harmoniser recherche et pratique*, edited by Stéphane Bouchard and Caroline Cyr, p. 245–73. Québec: Presses de l'Université du Québec.

Sayers, Stephen P., Joseph W. LeMaster, Ian M. Thomas, Gregory F. Petroski and Bin Ge. 'A walking school bus program: Impact on physical activity in elementary school children in Columbia, Missouri'. *American Journal of Preventive Medicine* 43, no. 5, suppl. 4 (November 2012): S384–89.

Sirard, John R., Sofiya Alhassan, Tirzah R. Spencer and Thomas N. Robinson. 'Changes in physical activity from walking to school'. *Journal of Nutrition Education and Behavior* 40, no. 5 (September 2008): 324–26.

Sirard, John R. and Megan E. Slater. 'Walking and bicycling to school: A review'. *American Journal of Lifestyle Medicine* 2, no. 5 (September 2008): 372–96.

Smith, Liz, Sarah H. Norgate, Tom Cherrett, Nigel Davies, Christopher Winstanley and Mike Harding. 'Walking school buses as a form of active transportation for children – a review of the evidence'. *Journal of School Health* 85, no. 3 (January 2015): 197–210.

Stewart, Orion, Anne Vernez Moudon and Charlotte Claybrooke. 'Common ground: Eight factors that influence walking and biking to school'. *Transport Policy* 24 (November 2012): 240–48.

Torres, Juan and Paul Lewis. 'Proximité et transport actif: le cas des déplacements entre l'école et la maison'. *Environnement Urbain/Urban Environment* 4 (2010).

Tudor-Locke, Catrine, Barbara E. Ainsworth and Barry M. Popkin. 'Active commuting to school'. *Sports Medicine* 31, no. 5 (2001): 309–13.

van der Ploeg, Hidde P., Dafna Merom, Grace Corpuz and Adrian E. Bauman. 'Trends in Australian children traveling to school 1971–2003: Burning petrol or carbohydrates?' *Preventive Medicine* 46, no. 1 (2008): 60–62.

Waygood, E. Owen D., Margareta Friman, Ayako Taniguchi and Lars E. Olsson. 'Children's life satisfaction and travel satisfaction: Evidence from Canada, Japan, and Sweden'. *Travel Behaviour and Society* 16 (July 2019): 214–23.

Chapter 9

THE SPATIAL DISTRIBUTION OF THE WALKING SCHOOL BUS: AN INTERACTIONIST APPROACH, ENVIRONMENT–FAMILY

Eléonore Pigalle[1,2]

[1]Dynamiques Economiques et Sociales des Transports
Univ Gustave Eiffel, AME-DEST, F-77454 Marne-la-Vallée, France

[2]Laboratoire Ville, Mobilité, Transport
Univ Gustave Eiffel, Ecole des Ponts, LVMT,
F-77454 Marne-la-Vallée, France

Introduction

The objective of this chapter is to study the effects of a sustainable mobility object that has received little scholarly attention: the walking school bus (WSB). The chapter is based on a thesis work in urbanism and spatial planning (2018) and a project on the Emerging Risks of Sustainable Mobility (ANR-14-CE22-0010).

Ordinary as it may seem at first glance, the WSB has received extensive media coverage and political attention, as well as arousing genuine enthusiasm among some parents. While many have sought to promote it and advocate its qualities, it has featured little – one would say not enough – interest in the scientific community. Like other sustainable mobility objects (e.g. trams, self-service bikes, ridesharing), this pedestrian version of the 'school run' has been targeted in communication campaigns intended to persuade people to shift their travel behaviours from the car to active modes, justified on the grounds of sustainable development and well-being (Pigalle 2021). Based on the concept of free modal choice, these publicity campaigns employ several discursive registers: empowerment, infantilisation, moralism or stigmatisation. They

single out and classify 'right' and 'wrong' behaviours, 'good' and 'bad' users. This application of ideology in public policies tends to individualise social problems and to discipline urban behaviours, an approach that undermines critical standpoints and the organisation of collective opposition to public policies (Reigner 2016). Several authors have already shown the negative effects of this type of framing in terms of socio-spatial inequalities (Reigner and Brenac 2019). This framing is found not only in mobility and transport policies, but is also observable in obesity prevention campaigns (Bergeron et al. 2019), campaigns on household waste sorting and collection (Barbier 2002; Dumain and Rocher 2017; Rumpala 1999), on lifestyle patterns justified on sustainable city grounds (Boissonade 2015), on the control of domestic energy consumption (Lévy et al. 2014, 2; Roudil 2018) or on household diet where differences are in reality governed by socio-economic factors (Plessz et al. 2016).

It would therefore seem worthwhile to explore the effects of little studied objects like the WSB, which are highly sensitive and difficult to challenge when child well-being is involved.

The paper is divided into six parts. After presenting the WSB through the international literature, from its origins to its anticipated but inconclusive effects, the second section will describe the study location and the methodology employed. The discussion will then focus on three areas: the institutionalisation of this system, its role as an alternative to the car and its sociological characteristics. The main findings will then be summarised in conclusion.

The Walking School Bus, Definition and Effects

Presentation

The WSB is a school travel arrangement in which children are escorted to school on foot (Huyghe 2014; Pigalle 2018b). It works like a bus, with routes, timetables and stops marked by signs located near parents' homes. While walking is not a new form of mobility, the innovation lies in its form: although it may be run under the aegis of municipalities, civil-society organisations or schools, it essentially relies on the commitment and availability of parents (Brenac 2013, 96).

The WSB seems to have originated in Australia in 1992 (Engwicht 1992) in a context of socio-ecological transition in reaction to increases in the number of children being taken to school by car from the 1970s onwards (van der Ploeg et al. 2008). The WSB then gradually spread to English-speaking countries like Canada, the United Kingdom or New Zealand. It was not until a few years later that it appeared in continental Europe, particularly in Lausanne

(Switzerland) after 1998, making that city a pioneer in the field (it is there that the French term *Pédibus* was coined).

Many private, public and civil-society structures seized upon it and promoted this system as an alternative to the car. The car is a problem: it is seen as polluting, space intensive, individualistic, dangerous and responsible for the rise in problems of obesity and chronic disease. Conversely, the WSB is thought to bring improvements in physical activity, safety, child socialisation and indeed the environment. In the literature, however, these effects are hedged about with qualifications (Smith et al. 2015).

Qualified effects in the literature

Varying impacts on public health

Sharp increases in obesity rates amongst children have been observed since the 1970s in many countries, becoming something of a worldwide pandemic (Wang and Lobstein 2006). The reduction in physical activity (Mcdonald 2007) caused by the increased use of the car to take children to school (Frank et al. 2004; Vandersmissen 2011) would seem to be one of the explanations for this phenomenon. However, findings on the health effects of the WSB remain inconclusive. Some studies have reported positive effects on physical activity, for example, in the United States (Heelan et al. 2009; Mendoza et al. 2011; Sirard et al. 2005) or in Scotland (McKee et al. 2007), while others conclude that it is ineffective in preventing obesity (Moodie et al. 2009). To mitigate this public problem, some studies highlight the role of policies in supporting the WSB (Turner et al. 2013), provided that the schools are located at an 'acceptable walking distance'[1] (Mcdonald 2007) from the home. School location[2] seems to be one of the factors that encourages car use and corroborates findings that show that the reduction in active travel modes is linked with increases in the distances between home and school (Torres and Lewis 2010), but also with the perceived dangers associated with road traffic (Mendoza et al. 2012). While the WSB fosters physical activity, safety fears seem to discourage walking to school and to favour car use.

---

1 With the progressive closure of primary schools, especially in rural areas, distance to school has increased over time and may partly account the decline in active transportation to school. It has the strongest influence on the decision to walk or bike. So this increase in distances to school would encourage a modal shift to the car.

2 This factor is particularly important in the context of a 'progressive closure and clustering of schools' (Brenac 2013, 99).

Unproven effects on road safety

According to the findings of Brenac and Roberts, the link between the WSB and road safety has not yet been proven (Brenac 2013, 97; Mendoza et al. 2012). Safety gains might be anticipated if children who had originally travelled on their own used the WSB. It has been demonstrated that groups are more visible than isolated individuals, reducing the risk of pedestrian accidents (Neumann 1988 quoted by Brenac 2013, 97). Similarly, a study conducted in Auckland in New Zealand shows that being accompanied by an adult significantly positively affects the risk of child pedestrians being injured on trips between home and school (Roberts 1995). Conversely, regarding the shift from car trips to WSB trips, Brenac finds the effect on child safety inconclusive.

> The shift from travel on foot to travel by car helps to improve safety. The sharp decline in mortality among pedestrian children observed in many countries (for example, in France, the 5–9 age group accounted for 6.8% of pedestrians killed in 1980, and 2% of pedestrians killed in 2004) is in fact largely explained by the reduction in their exposure to traffic (Roberts 1993) linked with the rise in the number of children being transported by car, notably to school. (Papon 1997; Klöckner 1998, cited by Brenac 2008, 19)

Negative effects on the acquisition of autonomy in dealing with traffic

In psychology, the long-term effects of the WSB would seem to have had the negative in that it delays the acquisition of autonomy in travel (Depeau 2008), since children rely on their escorts. This point raises questions about another effect of the WBS, which is whether it does not defer the problem of child road safety to their arrival at secondary school, when they are free to experience the street and road traffic. In this respect, the ONISR (French road safety observatory) reports a spike in accidents, deaths and injuries requiring hospitalisation – particularly among boys – following the start of secondary school (ONISR 2016, 64).

Positive effects on socialisation, community involvement and mental health

About the more social effects of the WSB, several studies concluded that the system helps to create social bonds, to facilitate dialogue between neighbours, parents and children (Kingham and Ussher 2007; Smith et al. 2015; Scharoun Benson et al. 2020; Godillon and Cloutier 2018). In addition, WSB improves perceived self-efficacy of children and parents and parents' outcome expectations related to active commuting to school (Cramer et al. 2021).

Research location

Lausanne in Switzerland

The research location is the city of Lausanne in French-speaking Switzerland, which is something of a European benchmark for the WSB. Given its media profile, the history, longevity and evolution of the WSB system in the city, Lausanne would seem to be an appropriate place to study it: it is both recognised and supported by many inhabitants and the municipality, which has a coordinator responsible for the WSB. In addition, like many other European cities, Lausanne is keen to restrict car use in urban centres to tackle contemporary problems, for example, by measures in favour of pedestrians, pedestrian zones or 30 kilometres per hour (km/h) zones. In this respect, the WSB is seen as a tool worth developing to resolve the school run problem.

WSB under civil-society management, a long history

In 1998, the first WSB in Lausanne was introduced in the station area of the Montriond district. It arose from discussions between several parents in the neighbourhood concerned about their children's safety on the way to school. This led to petitions to alert the local authorities to the need for safety measures. The Municipality's children's department proposed a forum in the neighbourhood community centre. This gave rise to several proposals such as the introduction of school patrols, the creation of new pedestrian crossings or the widening of pavements. The parents saw these measures as insufficient to reduce the risks to pupils on their way to school, so one local woman suggested that parents should set up a WSB. In 2012, a group formed a civil-society association to establish collective parental responsibility for the long-term operation of the WSB. The creation of an association also found a power resource with the capacity to address demands to the Municipality on planning issues (e.g. creation of a 20 km/h zone, and a widening of pavements). In order to instil a sense of belonging to the neighbourhood and to be visible to motorists, the WSB routes were marked by signs painted by local children. In 2016, the Association Pédibus Montriond was running three WSB routes and 64 volunteers.

WSB coordinated by the City of Lausanne

Lausanne is distinctive in that the Municipality created a position responsible for coordinating the WSB service, mainly tasked with promoting it by publishing information. The coordinator is also involved in organising school fairs, and informing and advising parents on operational matters.

Unlike the Association Pédibus Montriond, the Municipality pays the parent-representatives who manage the operation of the WSB to the tune of CHF 500 a year, a 'symbolic' remuneration for their participation in the five annual roundtable meetings to discuss any operational difficulties affecting the WSB. These meetings allow the coordinator to update the WSB routes on the City's website. The advantage is that the WSB coordinator has an overview of the public spaces that require measures such as a pedestrian crossing, a WSB or the distribution of information leaflets.

Methodology

Mapping and survey of WSB routes

In the first stage, all the active WSB routes in Lausanne were referenced on a map with geographic information software (Quantum GIS) (n = 11 in May 2016, when the survey was conducted). Data was collected from the Lausanne coordination and land registry department website, which updates the evolution of the WSB.

In the second stage, socio-spatial segregation based on socio-economic indicators was explored (i.e. socio-professional categories of households, education levels, standards of living and occupational status according to sex).

In the third stage, the method of surveying (urban transect) was used. The researcher followed all the routes of active WSBs (n = 11) *in situ* by walking, making direct observations, taking photographs, videos and notes. The objective was to investigate the spatial component of the WSB, its routes and its main recurrent features (type of urban fabric, density (inhab/km^2), vehicle traffic, specific street installations (traffic calming zones, parking space), green spaces). This step leads to the production of 11 plates with photographs representing the urban characteristics of the WSB routes (e.g. Figures 9.1 and 9.2).

Interviews with local promoters of the WSB

As mentioned earlier, Lausanne's WSB service is managed by two entities: the volunteer structure Association Pédibus Montriond and a WSB coordinator for the Municipality who works with parent-representatives. Both these structures are proud of this 'legacy' and promote their WSBs with considerable energy.

Thus, two semi-structured interviews were conducted to learn about the process involved in introducing the routes and their roles, including factors associated with urban policies and mobilities. On average, they lasted between one and three hours.

Figure 9.1 Sample plate produced as research material – WSB itinerary to Montriond School (1/2) (Lausanne)

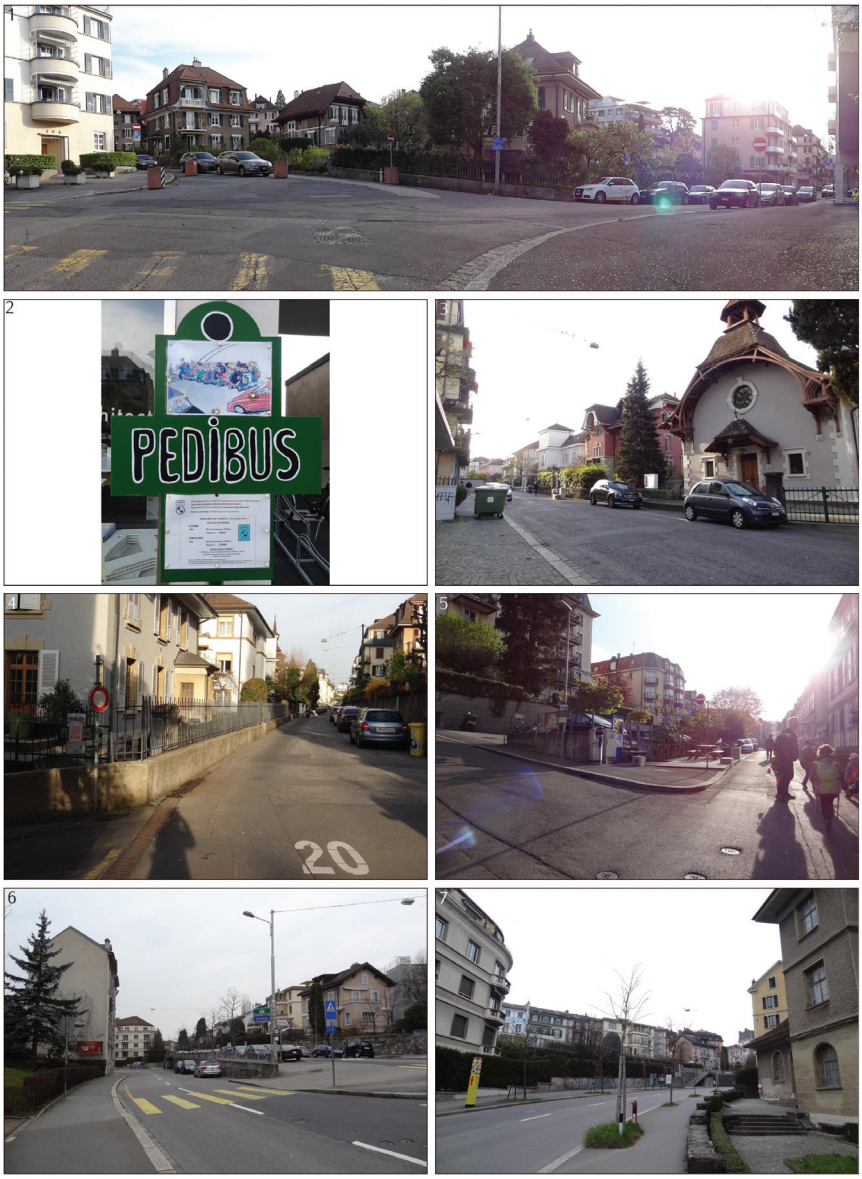


Figure 9.2 Sample plate produced as research material – WSB itinerary to Montriond School (2/2) (Lausanne)

Questionnaire-based survey with parents of pupils

The final aim was to understand the obstacles to and motives for the use of the WSB. A questionnaire-based survey was therefore conducted in four state primary schools in Lausanne between June and December 2016. A total of 218 households, representing 298 children, agreed to take part in this survey. The data cover the modes of travel used by the children for their trips to school, the representations associated with different modes of travel, the place of residence and socio-demographic and economic characteristics of households.

Statistical analyses

All statistical analyses were carried out with the R software[3] and several statistical tools were used. Specifically, Pearson correlations and logistical regressions were applied in order to determine potential associations between the presence of WSB routes and certain socio-demographic and economic characteristics of households. For all statistical analyses, the significance threshold was set at $p \leq 0.05$. A p-value lower than 0.05 was considered as statistically significant. It indicates strong evidence against the null hypothesis, as there is less than a 5% probability the null is correct (and the results are random). The stars indicate the degree of significance: * = $p < 0.05$; ** = $p < 0.01$; *** = $p < 0.001$.

Should the Process of Escorting Children to School Be Institutionalised?

Representation of the WSB, a vision that depends on its mode of management

Because there are currently three types of WSB operations in Lausanne (i.e. an association, a municipal coordinator supported by 'parent-representatives' and an 'informal'[4] management process), the parents seem to have different perceptions of the WSB (Figure 9.3). Statistically, the WSB services organised by the association are the ones most extensively used.[5] By comparison with the Association-run system, the WSB managed by the Municipality are seen more as non-functional ($p = 0.01$), raising questions about the effectiveness of the Municipality's policy in support of the system. Moreover, parents involved

3 Free software for statistics and data science.

4 Means that the WSB is not referenced by the Municipality and is also not run by an association.

5 The data that follow are founded on statistical analyses drawn from the questionnaire-based survey.

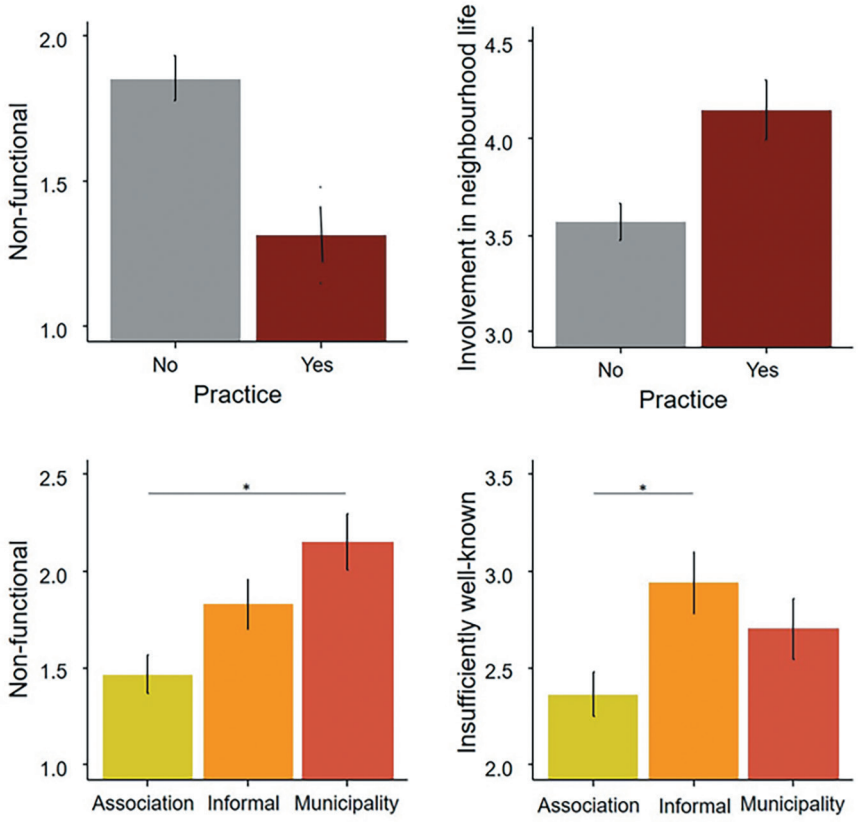


Figure 9.3 Significant variables in the two models

in the informal WSB (in comparison with those managed by the Association) consider the WSB to be insufficiently known (p = 0.02) and mainly choose their place of residence for ease of homeownership, the quality of the living environment and the school. Parents involved in the system declare themselves more involved in neighbourhood life (p = 0.007), corroborating our observations in the field. WSB users are more involved in voluntary organisations than those who do not use the system. They also have more developed relations with their neighbours. The parents explained, for example, that they were *happy to free up time for other parents*, that it was a *win-win system*, as well as being *fun and enjoyable*. The social dimension seems to be the key to the survival of the WSB. Moreover, the WSB would seem in some way to contribute to the construction of this sense of neighbourhood belonging, or even to the identity of individuals as inhabitants of a street or an area. This feeling could overcome the divide between those who do and do not participate, since

some parents who do not use the WSB service nevertheless seem proud to say that there is one in their neighbourhood. This means that the nature of the operation of the WSB could be an obstacle (institutionalised management) or an asset (volunteer management) to its success.

When the balance of roles between municipality, parents and schools is threatened, the WSB tends to decline

The findings indicate that municipal involvement does not guarantee the success of the WSB services, but can produce ambivalent effects. There is a difference in priorities between WSB users and municipal policy, a gap that has the potential to undermine the vitality of the WSB. The political authorities want the WSB to operate every morning and every evening, which is out of step with the needs of some families. Most children do not go straight home after school, but go to the park or to extracurricular activities. Also, some parents cannot contribute to the WSB because they have no one to look after young children or because the WSB timetables are not aligned with working hours.

Moreover, the local political authorities expect the WSB to operate as a permanent service. However, this system only works if it matches both the children's age and the parents' place of residence, which necessarily makes it a temporary arrangement with an uneven spatial distribution. Every school year, certain WSB lines inevitably close, open or change location to match the needs of families. The lack of flexibility in the WSB run by parent-representatives and coordinated by the City of Lausanne explains why it seems more fragile and difficult to sustain. Moreover, it is possible that the failure to listen to the views of local people may make people less willing to volunteer, resulting in the opposite of the hoped-for outcome.

In order to develop the WSB system, Lausanne Municipality relies heavily on local user-actors, that is parents and/or neighbourhood groups. Local volunteers can perceive this as a form of interference. Given that there was no need for the WSB to be institutionalised to operate and that the original definition of the system suggests that it should remain an informal system (Engwicht 1992), this intervention by the Municipality can be criticised as opportunistic (the WSB as a visible political symbol of sustainable mobility) and possibly as contributing to a loss of legitimacy of public action.

While the voluntary WSB services rely on the motivation and involvement of parents, those managed by the Municipality tend to be perceived as a public service. The institutionalisation of the WSB gives users the impression that local politicians have taken responsibility for escorting children to school. This means that the argument that the WSB is an everyday time-saving instrument

may prompt some parents to relinquish their social and time commitments and their responsibility for taking their children to school.

What if the WSB Were Not an Alternative to the Car?

The WSB operates primarily in areas that welcome cars

Our survey of WSB routes *in situ* by walking highlighted a homogeneity between WSB routes. WSB services mainly develop in medium- or high-density areas of collective housing, surrounded by low-speed roads, provided that the dedicated pedestrian space is sufficient and that the perceived danger from cars is reasonable. Conversely, the findings suggest that WSBs are not needed in areas such as big housing complexes, where children already walk to school and there are no cars, resulting in no interactions between pedestrians and motorists.

This difference is understandable, since the big housing complexes were created by the functional urban planning policies of the 1950s to 1970s with a principle of strict separation of traffic lanes between different modes. This functionalist urbanism differs from contemporary urban planning policies, which seek to reconcile different modes of travel within the same space using traffic-calming measures such as 30 and 20 km/h zones, places where WSB services are present (Figure 9.4). Nevertheless, their presence is insufficient to maximise active modes, because the car is still perceived as a threat to children. As a result, the WSB is seen as a solution to the problems generated by the presence of cars in public space, which is experienced as problematic for the movement of children on foot.

> Vehicle traffic [is] excessive because of parents (so the pedestrian priority zone is highly theoretical). (Mother, 2016, Lausanne)

The function of 30 and 20 km/h zones is to reconcile 'traffic' and 'local life' by fostering coexistence between different users. The difference between these two zones is that in 30 km/h zones, motorised users retain priority overactive modes except on pedestrian crossings, whereas the 20 km/h zone or 'pedestrian priority zone' prioritises active modes over motorists. However, the purpose of these traffic calming zones is not to reduce the presence of the car, but only to act as a disincentive to non-local through traffic (Reigner et al. 2013, 69–72).

This similarity in WSB routes refers to the *Safe city* model to be achieved (Reigner and Brenac 2019). This model aims to normalise urban living in order to make the city safe, sustainable and clean, but it does not consider social issues, thus reinforcing social inequalities.

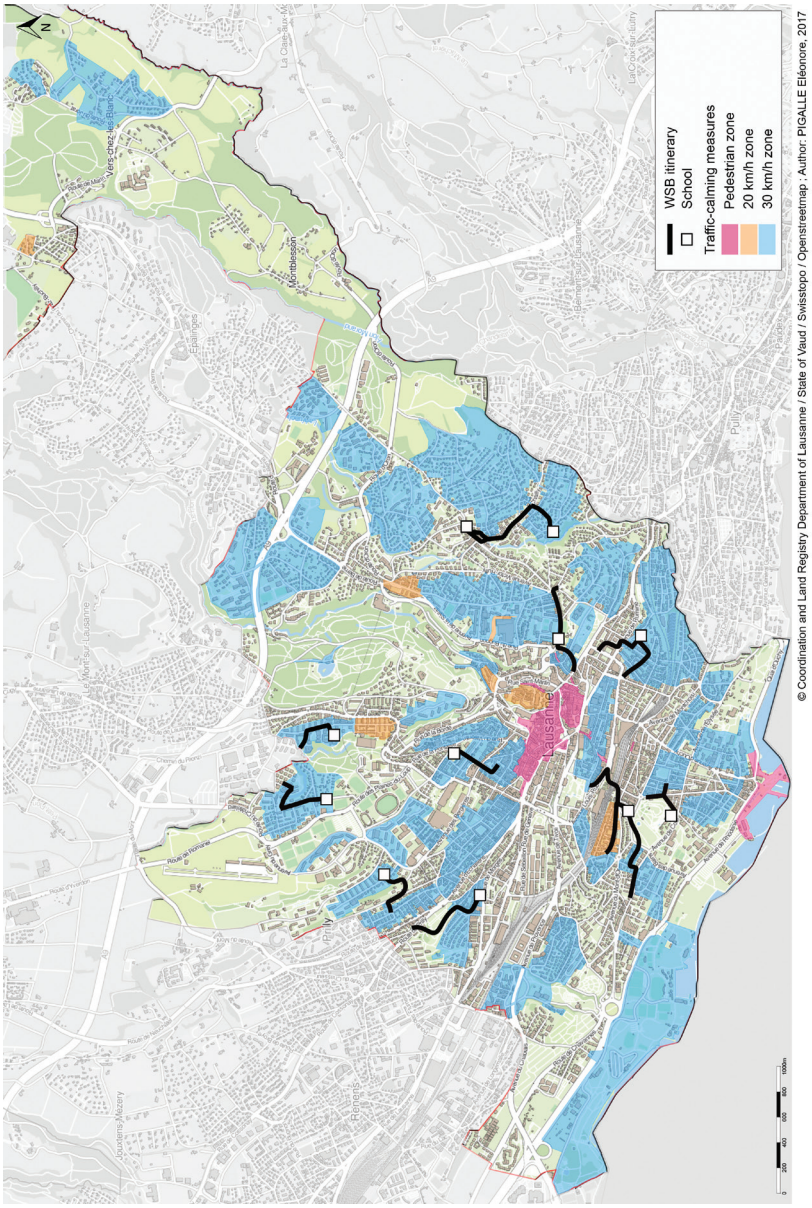


Figure 9.4 WSB in traffic calming zones in Lausanne

The WSB as a way to mitigate the failures of public space planning

From the point of view of parents, the WSB is a way to mitigate several structural failures and to make walking to school compatible with a traffic system that still favours the car.

While the WSB arrived on the policy agenda in part to make travel safer for children, users do not seem to perceive it as sufficient, given the existence of other measures introduced in parallel with the WSB, such as the presence of 'lollipop' crossing patrols. The volunteers at Association Pédibus Montriond deploy 'lollipop' people to take turns in helping children cross roads that are considered potentially dangerous. This pedestrian crossing, equipped with a central reservation for safety purposes, is located in the 'dense' city on a two-way avenue with a 50 km/h speed limit. This road links Lausanne station to the motorway, which results in traffic problems and traffic speeds that users consider too high, making the environment *unpleasant* and *noisy*. This raises questions about inhabitants taking charge of contemporary public problems in order to 'mitigate certain structural failures, fragmentation effects and/or spatial divides in the city' (Depeau 2012, 109).

Other studies also show that the WSB alone is not sufficient. Modifications to public space would be more effective in encouraging children to walk to school. For example, the *Safe Routes to School* programme developed by the City of Odense in Denmark in the 1970s significantly improved safety (15–20% fewer accidents; (Blomberg et al. 2008)) by means of traffic calming measures. In 2005, Collins and Kearns (2005) indicated that traffic calming measures would be more effective in reducing congestion near schools than promoting the WSB. This is true, for example, in German-speaking Switzerland, where traffic calming measures are more developed than in the French-speaking part of the country.

> Only around 10% of children in German-speaking Switzerland are driven to school by their parents at least once a week, while the figure is 50% in the French-speaking part. This fact is all the more striking in that the WSB system is almost non-existent in German-speaking Switzerland. (ATS 2017)

The example of the city of Pontevedra in Galicia (Spain) also challenges the effectiveness of the WSB. Back in 1999, the Mayor decided to redesign the public space in the city centre by considerably reducing the presence of cars. The planning department developed a traffic and parking scheme. Street side parking was eliminated and replaced by pay-to-use underground car parks in the city centre and free parking spaces beyond. Pavements were

removed, planted areas and playgrounds were created, and street furniture such as benches were installed. In areas where cars remained, the pavements were widened, and the speed limit was reduced to 20 and 30 km/h. At the same time, WSBs disappeared from the town centre (Vázquez 2009).

> 'We need to give children back their childhood by trusting them, by giving them the opportunity to be autonomous', he [the mayor] argued. Rather than setting up a WSB where the children wait for a group to go by, Miguel Fernández preferred to count on total independence. (Koch 2014)

In light of our findings and these observations, the promotion of the WSB does not appear to respond to public problems, whether concerning the environment, safety or public health. On the contrary, while WSBs can be used as a springboard (e.g. while public works are in progress), their presence indicates that the neighbourhood is not sufficiently adapted for walking and that adult accompaniment is considered necessary.

So why do local public policies not focus instead on planned walking routes to school? Why implement public policies that are known to be less effective? In public policy terms, the WSB represents an option that is relatively cheap in terms of human and financial resources and avoids the need to resolve certain urban deficiencies that are not conducive to children going to school on foot.

Unconsidered Social Effects

The WSB sociologically restricted to certain neighbourhoods

In Lausanne, there is a clear divide between the east–west neighbourhoods (wealthy/less wealthy) which the WSB seems partly to reflect. In detail, 73% of WSB routes are situated in areas where the average salary corresponds to the top third and fourth income quartiles in Lausanne (Figure 9.5; Pigalle 2018a). A link can be discerned with indicators for socio-economic categories, for education levels, for standards of living and for occupational status according to sex. With respect to socio-economic category, there is a divide between the so-called higher categories, which are positively correlated with the number of active routes (politicians ($r = 0.74$); liberal professions ($r = 0.77$); higher occupational categories ($r = 0.73$)) and people from so-called lower socio-economic category, which are negatively correlated with the number of active routes (unemployed ($r = -0.61$); unskilled workers ($r = -0.67$)). This finding is further reinforced by the fact that the number of routes also seems to be linked with the level of education: positively correlated with people with a university education ($r = 0.63$) and negatively with people lacking qualifications ($r = -0.65$) or in training

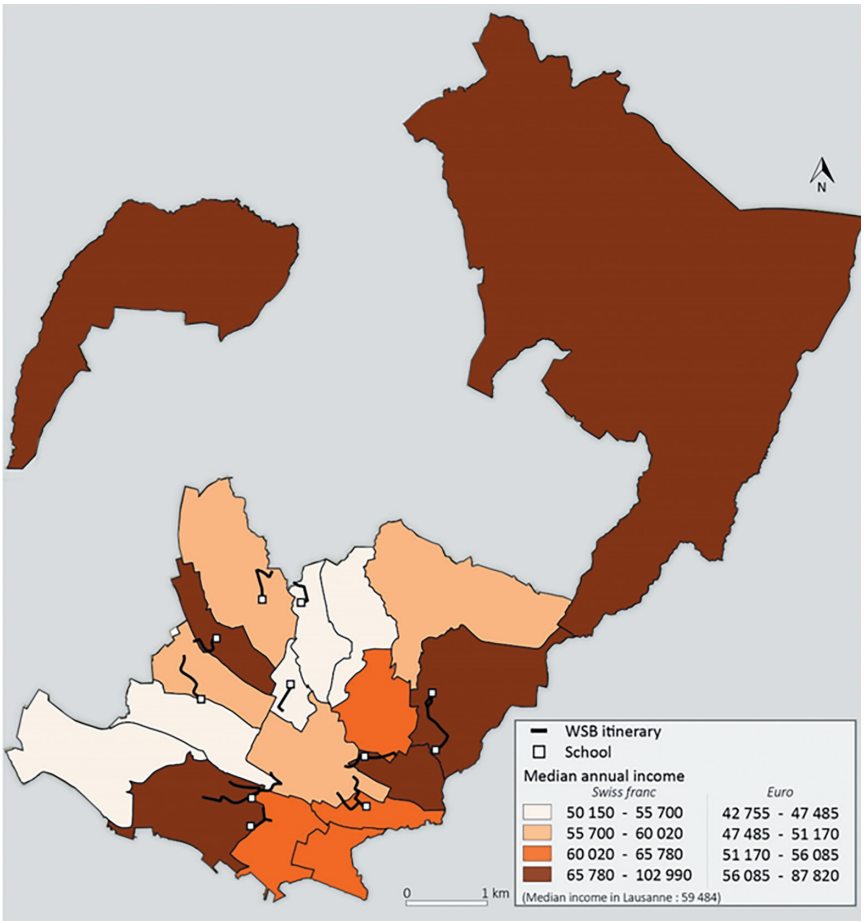


Figure 9.5 Spatial distribution of WSB services according to disposable household income per neighbourhood in Lausanne

(r = –0.68). Regarding occupational status, we observe that active WSB routes tend to be in neighbourhoods with a large number of stay-at-home men or women (respectively: r = 0.67; r = 0.75) or men of independent means or retired (r = 0.59). Finally, the correlations between the number of WSB routes and living standards are also positive (r = 0.66). This criterion seems pivotal since it would seem that below an income of 50,503 CHF (47,195 EUR) there is a less than 50% probability that the neighbourhood has at least one active WSB route. It is therefore above this value that the majority of neighbourhoods benefit from the WSB system. This uneven distribution of WSB systems has already been observed in New Zealand (Collins and Kearns 2005) and in France (e.g. Le Grand Lyon; Brenac 2013, 96).

User profiles and time management

Social tendencies favour the use of the WSB, which could explain the unequal distribution noted above. The volunteers are mainly non-working women from higher socio-economic categories, with some time flexibility, involved in voluntary organisations associated with education and the environment. Other studies have already shown that the WSB is a service mainly organised by mothers (Collins and Kearns 2010; Depeau 2012, 79), often in part-time jobs that enable them to drop off and pick up their children at school (Klöckner 1998).

The WSB forms part of a set of everyday activities scheduled, structured and sequenced within a limited time frame. While it enables some parents to save time, for others, it is restricted. The difficulties are mainly linked to the complexity of juggling private life, work and childcare.

> The WSB is not at all suited to families with two working parents, so no […] We are in a new era where services need to adapt to new family circumstances and I don't have the availability that the WSB requires. (Mother, 2016, Lausanne)
>
> With three small children, the journeys to school and nursery take quite a lot of organising. I have variable working hours, so I can't make a commitment. (Mother, 2016, Lausanne)

Single-parent families or people without flexible working hours cannot free up the time and are therefore excluded from the system. These findings cast light on the potential for group volunteer activities, which seems largely determined by social, geographical and identitarian factors. They show how difficult it is to synchronise working life and family life, emphasising a form of time vulnerability that is dependent on having the resources (economic, social and temporal) needed to manage everyday activities (e.g., childcare, female jobs; Drevon et al. 2020). If we want to limit these vulnerabilities, some of which are unnoticed, some hidden, they need to be considered and incorporated in the upfront stages of public policymaking (on mobilities, planning, safety, extracurricular activities, jobs, social).

WSB: beyond a trip, a social practice

The WSB is more of a social and community practice than a simple journey on foot from home to school (Pigalle 2019). It appears that the WSB is closely linked with social and collective neighbourhood dynamics. Moreover, it seems to coexist with other forms of socialisation, such as street parties or the organisation of special 'walk to school' events. It would seem to be a way of life and being part of a specific social group that shares certain values

but remains relatively closed and homogeneous. This suggests the possibility of a 'neighbourhood effect' (Authier et al. 2007) that might prompt parents to look for positive self-representations linked with a sense of identity and family aspirations associated with children's day-to-day mobility (Holdsworth 2013; Jensen et al. 2015; Kaufmann and Widmer 2005; McLaren 2016; Murray 2009; Pooley et al. 2011).

Our findings show that the values expected and sought out by parents at the start seem to be closely linked with the history of the neighbourhood, which facilitates group volunteering and representations, and through them, more broadly, contributes to family lifestyles. Hence, when educational values combine with residential aspirations and sensitivities to questions of safety and accessibility, a neighbourhood dynamic is gradually created, leading to the emergence of collective action. Consequently, parents not involved in WSB arrangements can feel excluded, resulting in the system contributing in a certain way to the process of social differentiation (Depeau 2007, 164).

Conclusion

The unequal distribution of WSB services seems to be primarily determined by geographically embedded social dispositions, where there exists a history of collective engagement. Users of the WSB tend to have a propensity for community activism, to be well off, and to be involved in local volunteer groups focusing on education and the environment. While the environment–family connection maximises the capacities for collective action in favour of the WSB, it remains a spatially and socially limited practice. These findings therefore invite prudence with regard to public policy communication strategies.

In political terms, as other authors have already noted, the WSB would seem to be something of a 'smokescreen' (Brenac 2013, 98). Its deployment is uneven, marginal and temporary, and its effects are small and volatile (Brenac 2013, 96). As a result, it seems uncertain whether much can be expected of this system, at least in resolving society's ills concerning ecological and climate transition and public health. Moreover, it also presents real difficulties for public policies where it is both difficult to incorporate into planning programmes (McMillan 2007) and fails to respond fully to the needs of families. In short, two points of view emerge.

For local public policies, the WSB is a localised solution when local authorities are unable or unwilling to regulate the automobile system. It represents a relatively small investment in human and financial resources, where all that needs to be done is to support and legitimise this commitment

through communication and awareness-raising campaigns. This avoids the need to resolve specific urban failings that are not conducive to walking to school practices.

> Walking School Buses do not challenge the views that streets are for cars and children are at risk in public space. They have similar effects to the provision of parks and playgrounds for children in that they serve to keep children out of the way of adults. (Cunningham and Jones 1999, cited by Tranter and Malone 2003, 20).

For parents, the WSB is perceived, on the one hand, as a time-saving way to get their children to school. On the other hand, and for other parents, it is seen as a way to recover a degree of control over their children's safety since the only reason for the existence of the WSB is that the presence of the car in public space is experienced as problematic for children on foot. The risk of the WSB is that it may make some parents feel a sense of irresponsibility and guilt when they do not escort their children to school (Hillman 1999, 2006). An educational value that purportedly consolidates the identity and role of 'good' responsible parents, as has already been observed with parents who drive their children to school and the culture of the 'good mother' committed to a role in her child's upbringing (Dowling 2000). During our fieldwork, a mother told us:

> It [WSB] deprives children of their last chance to go to school on their own. In other cities, it is possible even for small children. But in Lausanne, people are considered irresponsible if they do it. […] The WSB is perhaps not the right answer to the problem of safety around schools, but it prevents the development of other solutions: 'We already have the WSB, why bother with anything else?' (Mother, 2016, Lausanne)

Perspectives: Children's Perceptions

One limitation of this work must be acknowledged: the lack of consideration for children's perceptions. Indeed, parents were interviewed because they are (mostly) involved in the decision of how their children move around (Lewis and Torres 2010), especially with regard to the dangers of traffic and aggression (Prezza et al. 2005).

However, even if children do not decide, they have a specific perception of their environment. During the research time, the researcher had the opportunity to have informal exchanges with children who travelled to school,

either by WSB or by bus. Based on their testimonies, it was possible to describe three families of behaviours depending on age and culture.

First, some children (especially in Lausanne) had a positive image of the WSB and said they were 'happy' to go to school with their friends (also observed in Quebec; Godillon and Cloutier 2018). In addition, some children travelling by bus would have liked to go to school in WSB, but if the distance between home and school was high, there were no safe facilities for pedestrians either (e.g. pavements). Second, most of the older children involved in the WSB were looking forward to their parents' permission to walk to school alone, and not anymore with WSB. They were eager to be independent. Third, some children interviewed elsewhere (especially in France) showed a certain reluctance, even shame, to go to school in WSB.

To conclude, all the exploratory elements in this chapter suggest that WSB is a spatially and socially anchored system with a strong cultural background. If they question children's place in the city (Valentine and McKendrck 1997; Rivière 2021), they also raise the question of how to integrate ephemeral services into urban planning.

References

ATS. 2017. 'Trajets scolaires: les parents inquiets malgré les Pédibus'. *La Liberté*, 22 September 2017. https://www.laliberte.ch/news-agence/detail/trajets-scolaires-les-parents-inquiets-malgre-les-pedibus/409000.

Authier, Jean-Yves, Marie-Hélène Bacqué, and France Guérin-Pace, eds. 2007. *Le Quartier: Enjeux Scientifiques, Actions Politiques et Pratiques Sociales*. Recherches. Paris: Éditions de la Découverte.

Barbier, Rémi. 2002. 'La fabrique de l'usager. Le cas de la collecte sélective des déchets'. *Flux* 48–49 (2-3): 35–46. https://doi.org/10.3917/flux.048.0035.

Bergeron, Henri, Patrick Castel, and Abigail C. Saguy. 2019. 'A French Paradox? Toward an Explanation of Inconsistencies between Framing and Policies'. *French Politics, Culture & Society* 37 (2): 110–30. https://doi.org/10.3167/fpcs.2019.370205.

Blomberg, Richard D., Arlene M. Cleven, F. Dennis Thomas, Raymond C. Peck, and Inc. Dunlap and Associates. 2008. 'Evaluation of the Safety Benefits of Legacy Safe Routes to School Programs'. DOT-HS-811-013. https://rosap.ntl.bts.gov/view/dot/1850.

Boissonade, Jérôme. 2015. *La ville durable controversée: les dynamiques urbaines dans le mouvement critique*. Paris: Pétra.

Brenac, Thierry. 2008. 'Insécurité routière des jeunes piétons: processus d'accidents et stratégies de prévention'. *Territoire en mouvement*, no. 1 (December): 14–24. https://doi.org/10.4000/tem.1012.

Brenac, Thierry. 2013. 'Pédibus'. In *Nouvelles idéologies urbaines: dictionnaire critique de la ville mobile, verte et sûre*, edited by Hélène Reigner, Thierry Brenac, and Frédérique Hernandez, 95–99. Espace et territoires. Rennes: Presses universitaires de Rennes.

Collins, Damian C. A., and Robin A. Kearns. 2005. 'Geographies of Inequality: Child Pedestrian Injury and Walking School Buses in Auckland, New Zealand'. *Social Science & Medicine* 60 (January): 61–69. https://doi.org/10.1016/j.socscimed.2004.04.015.

Collins, Damian, and Robin A. Kearns. 2010. 'Walking School Buses in the Auckland Region: A Longitudinal Assessment'. *Transport Policy* 17 (1): 1–8. https://doi.org/10.1016/j.tranpol.2009.06.003.

Cramer, Nicole, Miriam J. Haviland, Chuan Zhou, and Jason A. Mendoza. 2021. 'Impact of Walking School Bus Programs on Self-Efficacy and Outcome Expectations'. *Journal of Physical Activity & Health*, May, 1–5. https://doi.org/10.1123/jpah.2020-0453.

Cunningham, Chris J., and Margaret A. Jones. 1999. 'The Playground: A Confession of Failure?' *Built Environment* 25 (1): 11–17. http://www.jstor.org/stable/23289138.

Depeau, Sandrine. 2007. 'De La Mobilité Quotidienne Des Enfants Au Cadre Résidentiel Des Parents: Se Déplacer Autrement Pour Construire Autrement Ses Rapports à l'espace. Le Cas Des Pédibus à Rennes'. In *Les Mobilités Quotidiennes: Représentation et Pratiques. Vers l'identité de Déplacement*, edited by Thierry Ramadier, Samuel Carpentier, Carole Després, Christophe Enaux, Kaïra Hamza, Anne Fortin, Pierre Lannoy, and S. Martin-Roy, Rapport final du programme ATIP CNRS Jeunes Chercheurs 2005, 139–66. Strasbourg: Rapport final du programme ATIP CNRS Jeunes Chercheurs 2005. https://www.researchgate.net/profile/Carole-Despres/publication/49131339_Les_mobilites_quotidiennes_Representation_et_pratiques_Vers_l´identite_de_deplacement/links/571da66d08ae6eb94d0e5634/Les-mobilites-quotidiennes-Representation-et-pratiques-Vers-lidentite-de-deplacement.pdf.

Depeau, Sandrine. 2008. 'Nouvelles Façons de Marcher Des Enfants En Milieu Urbain: Le Rôle Du Pédibus Dans l'expérience Du Déplacement'. In *Le Piéton et Son Environnement: Quelles Interactions? Quelles Adaptations?*, edited by Marie-Axelle Granié and Jean-Michel Auberlet, Actes n 115: 61–72. Arcueil: Collections de l'INRETS.

Depeau, Sandrine. 2012. 'Les bus pédestres dans les périphéries urbaines rennaises: dynamiques et fonctions dans les rapports à l'espace des familles'. In *Trames de mobilités collectives: nouvelles expériences publiques du déplacement dans les périphéries urbaines. Analyse comparative dans les territoires de l'ouest*, edited by Marc Dumont, PUCA/MEDDM, 37–113. Paris: Rapport final, Programme 'L'avenir des périphéries urbaines. La mobilité et le péri urbain', 2009–12.

Dowling, Robyn. 2000. 'Cultures of Mothering and Car Use in Suburban Sydney: A Preliminary Investigation'. *Geoforum* 31 (3): 345–53. https://doi.org/10.1016/S0016-7185(99)00048-2.

Drevon, Guillaume, Philippe Gerber, and Vincent Kaufmann. 2020. 'Dealing with Daily Rhythms: Families' Strategies to Tackle Chronic Time Pressure'. *Sustainability* 12 (17): 7193. https://doi.org/10.3390/su12177193.

Dumain, Aurélie, and Laurence Rocher. 2017. 'Des pratiques citoyennes en régime industriel: les courts-circuits du compost'. *Flux* 2 (108): 22–35. https://doi.org/10.3917/flux1.108.0022.

Engwicht, David. 1992. *Towards an Eco-City: Calming the Traffic*. Sydney, NSW: Envirobook.

Frank, Lawrence D., Martin A. Andresen, and Thomas L. Schmid. 2004. 'Obesity Relationships with Community Design, Physical Activity, and Time Spent in Cars'. *American Journal of Preventive Medicine* 27 (2): 87–96. https://doi.org/10.1016/j.amepre.2004.04.011.

Godillon, Sylvanie, and Marie-Soleil Cloutier. 2018. 'Sur le chemin de l'école: perceptions de parents et d'enfants du primaire face au risque routier lors de la mise en place d'un Trottibus au Québec'. *Enfances Familles Générations. Revue interdisciplinaire sur la famille contemporaine*, no. 30 (August). https://journals.openedition.org/efg/2623.

Heelan, Kate A., Bryce M. Abbey, Joseph E. Donnelly, Matthew S. Mayo, and Gregory J. Welk. 2009. 'Evaluation of a Walking School Bus for Promoting Physical Activity in Youth'. *Journal of Physical Activity & Health* 6: 560–67. http://journals.humankinetics.com/AcuCustom/Sitename/Documents/DocumentItem/17390.pdf.

Hillman, Mayer. 1999. 'The Impact of Transport Policy on Children's Development'. In *Canterbury Safe Routes to Schools Project Seminar*. Vol. 29. Canterbury Christ Church University College, UK.

Hillman, Mayer. 2006. 'Children's Rights and Adults' Wrongs'. *Children's Geographies* 4 (1): 61–67. https://doi.org/10.1080/14733280600577418.

Holdsworth, Clare. 2013. *Family and Intimate Mobilities*. London: Palgrave Macmillan UK. http://link.springer.com/10.1057/9781137305626.

Huyghe, Marie. 2014. 'Walking School Buses'. Dictionary. *Mobile Lives Forum* (blog). 19 September 2014. https://en.forumviesmobiles.org/marks/walking-school-buses-2554.

Jensen, Ole B., Mimi Sheller, and Simon Wind. 2015. 'Together and Apart: Affective Ambiences and Negotiation in Families' Everyday Life and Mobility'. *Mobilities* 10 (3): 363–82. https://doi.org/10.1080/17450101.2013.868158.

Kaufmann, Vincent, and Éric Widmer. 2005. 'L'acquisition de la motilité au sein des familles'. *Espaces et sociétés* 1 (120–21): 199–217. https://doi.org/10.3917/esp.120.0199.

Kingham, Simon, and Shannon Ussher. 2007. 'An Assessment of the Benefits of the Walking School Bus in Christchurch, New Zealand'. *Transportation Research Part A: Policy and Practice* 41 (6): 502–10. https://doi.org/10.1016/j.tra.2006.11.008.

Klöckner, Dorothée. 1998. 'Analyse Des Pratiques d'accompagnement Des Enfants et de Leurs Conséquences'. *Recherche – Transports – Sécurité*, no. 59 (April): 17–29. https://doi.org/10.1016/S0761-8980(98)90052-8.

Koch, Marjolaine. 2014. 'Pontevedra, la ville qui marche'. *Lettre du Cadre Territorial*, 23 October 2014. http://www.lettreducadre.fr/9945/pontevedra-la-ville-qui-marche-sans-voitures/.

Lévy, Jean-Pierre, Nadine Roudil, Amélie Flamand, and Fateh Belaïd. 2014. 'The Determinants of Domestic Energy Consumption'. *Flux* 2 (96): 40–54.

Lewis, Paul, and Juan Torres. 2010. 'Les parents et les déplacements entre la maison et l'école primaire: quelle place pour l'enfant dans la ville?' *Enfances, Familles, Générations*, no. 12: 44–64. https://doi.org/10.7202/044392ar.

Mcdonald, N.C. 2007. 'Active Transportation to School: Trends Among U.S. Schoolchildren, 1969–2001'. *American Journal of Preventive Medicine* 32 (6): 509–16. https://doi.org/10.1016/j.amepre.2007.02.022.

McKee, Rosie, Nanette Mutrie, Fiona Crawford, and Brian Green. 2007. 'Promoting Walking to School: Results of a Quasi-Experimental Trial'. *Journal of Epidemiology and Community Health* 61 (9): 818–23. https://doi.org/10.1136/jech.2006.048181.

McLaren, Arlene Tigar. 2016. 'Families and Transportation: Moving towards Multimodality and Altermobility?' *Journal of Transport Geography* 51 (February): 218–25. https://doi.org/10.1016/j.jtrangeo.2016.01.006.

McMillan, Tracy E. 2007. 'The Relative Influence of Urban Form on a Child's Travel Mode to School'. *Transportation Research Part A: Policy and Practice* 41 (1): 69–79. https://doi.org/10.1016/j.tra.2006.05.011.

Mendoza, Jason A., Kathy Watson, Tom Baranowski, Theresa A. Nicklas, Doris K. Uscanga, and Marcus J. Hanfling. 2011. 'The Walking School Bus and Children's Physical Activity: A Pilot Cluster Randomized Controlled Trial'. *Pediatrics*, 3 (128): e537–44. https://doi.org/10.1542/peds.2010-3486.

Mendoza, Jason A., Kathy Watson, Tzu-An Chen, Tom Baranowski, Theresa A. Nicklas, Doris K. Uscanga, and Marcus J. Hanfling. 2012. 'Impact of a Pilot Walking School Bus Intervention on Children's Pedestrian Safety Behaviors: A Pilot Study'. *Health & Place* 18 (1): 24–30. https://doi.org/10.1016/j.healthplace.2011.07.004.

Moodie, Marjory, Michelle Haby, Leah Galvin, Boyd Swinburn, and Robert Carter. 2009. 'Cost-Effectiveness of Active Transport for Primary School Children – Walking School Bus Program'. *International Journal of Behavioral Nutrition and Physical Activity* 6 (September): 63. https://doi.org/10.1186/1479-5868-6-63.

Murray, Lesley. 2009. 'Making the Journey to School: The Gendered and Generational Aspects of Risk in Constructing Everyday Mobility'. *Health, Risk & Society* 11 (5): 471–86. https://doi.org/10.1080/13698570903183889.

Neumann, L. 1988. 'Strasse Und Verkehrssicherheit, Zusammenstellung Bisheriger Erkenntnisse'. Stuttgart, Steierwald Schönharting und Partner, Innenministerium Baden-Württemberg.

ONISR. 2016. 'La sécurité routière en France. Bilan de l'accidentalité de l'année 2016'. Paris: L'Observatoire national interministériel de la sécurité routière. www.securite-routiere.gouv.fr/content/download/37021/353698/version/1/file/Bilan+de+la+s%C3%A9curit%C3%A9+routi%C3%A8re+2016.pdf.

Papon, F. 1997. 'Les Modes Oubliés: Marche, Bicyclette, Cyclomoteur, Motocyclette'. *Recherche, Transports, Sécurité*, no. 56: 61–75. http://cat.inist.fr/?aModele=afficheN&cpsidt=2297711.

Pigalle, Eléonore. 2018a. 'Distribution Spatiale Des Pédibus: Une Approche Interactionniste Environnement-Famille. Les Cas de Lausanne En Suisse et Aix-En-Provence En France'. *URBIA - Cahiers Du Développement Urbain Durable*, no. 4: 175–90.

Pigalle, Eléonore. 2018b. 'Sur le chemin des écoliers, les politiques en faveur de la marche à pied: le pédibus en France et en Suisse romande: discours, déploiement et pratiques'. Thèse de doctorat, Aix-en-Provence: Aix-Marseille Université. http://www.theses.fr/2018AIXM0362.

Pigalle, Eléonore. 2019. 'Déplacements en Pédibus à l'épreuve des modes d'habiter'. *Espaces et sociétes* 4 (179): 93–110. https://www.cairn.info/revue-espaces-et-societes-2019-4-page-93.htm.

Pigalle, Eléonore. 2021. 'Les Risques Associés à La Construction Du Problème. Le Cas Du Pédibus'. In *Les Faux-Semblants de La Mobilité Durable. Risques Sociaux et Environnementaux*, edited by Hélène Reigner and Thierry Brenac, 71–85. Mobilités et Sociétés. Paris: Éditions de la Sorbonne.

Plessz, Marie, Sophie Dubuisson-Quellier, Séverine Gojard, and Sandrine Barrey. 2016. 'How Consumption Prescriptions Affect Food Practices: Assessing the Roles of Household Resources and Life-Course Events'. *Journal of Consumer Culture* 16 (1): 101–23. https://doi.org/10.1177/1469540514521077.

Ploeg, Hidde P. van der, Dafna Merom, Grace Corpuz, and Adrian E. Bauman. 2008. 'Trends in Australian Children Traveling to School 1971–2003: Burning Petrol or Carbohydrates?' *Preventive Medicine* 46 (January): 60–62. https://doi.org/10.1016/j.ypmed.2007.06.002.

Pooley, Colin G., Dave Horton, Griet Scheldeman, Miles Tight, Tim Jones, Alison Chisholm, Helen Harwatt, and Anne Jopson. 2011. 'Household Decision-Making for Everyday Travel: A Case Study of Walking and Cycling in Lancaster (UK)'. *Journal of Transport Geography*, Special Section on Alternative Travel Futures, 19 (6): 1601–7. https://doi.org/10.1016/j.jtrangeo.2011.03.010.

Prezza, Miretta, Francesca Romana Alparone, Carmela Cristallo, and Secchiano Luigi. 2005. 'Parental Perception of Social Risk and of Positive Potentiality of Outdoor Autonomy for Children: The Development of Two Instruments'. *Journal of Environmental Psychology* 25 (4): 437–53. https://doi.org/10.1016/j.jenvp.2005.12.002.

Reigner, Hélène. 2016. 'Neoliberal Rationality and Neohygienist Morality. A Foucaldian Analysis of Safe and Sustainable Urban Transport Policies in France'. *Territory, Politics, Governance* 4 (2): 196–215. https://doi.org/10.1080/21622671.2015.1123647.

Reigner, Hélène, and Thierry Brenac. 2019. 'Safe, Sustainable … but Depoliticized and Uneven – A Critical View of Urban Transport Policies in France'. *Transportation Research Part A: Policy and Practice* 121: 218–34. https://doi.org/10.1016/j.tra.2019.01.023.

Reigner, Hélène, Thierry Brenac, and Frédérique Hernandez. 2013. *Nouvelles idéologies urbaines: dictionnaire critique de la ville mobile, verte et sûre*. Espace et territoires. Rennes: Presses universitaires de Rennes.

Rivière, Clément. 2021. *Leurs enfants dans la ville: Enquête auprès de parents à Paris et à Milan*. Presses universitaires de Lyon.

Roberts, Ian. 1993. 'Why Have Child Pedestrian Death Rates Fallen?' *British Medical Journal* 306 (6894): 1737–39. http://www.bmj.com/content/306/6894/1737?variant=abstract.

Roberts, Ian. 1995. 'Adult Accompaniment and the Risk of Pedestrian Injury on the School-Home Journey'. *Injury Prevention* 1 (4): 242–44.

Roudil, Nadine. 2018. 'De la «ville sûre» à la «ville sobre»: normalisation des conduites habitantes et fabrique de la ville'. HDR en Sociologie, Lyon: École nationale supérieure d'architecture de Lyon.

Rumpala, Yannick. 1999. 'Le Réajustement Du Rôle Des Populations Dans La Gestion Des Déchets Ménagers. Du Développement Des Politiques de Collecte Sélective à l'hétérorégulation de La Sphère Domestique'. *Revue Française de Science Politique* 49 (4/5): 601–30. http://www.jstor.org/stable/43119680.

Scharoun Benson, S. M., B. Bruner, and A. Mayer. 2020. 'Encouraging Active Transportation to School: Lessons Learned from Implementing a Walking School Bus Program in Northeastern Ontario'. *Journal of Transport & Health*, September, 100914. https://doi.org/10.1016/j.jth.2020.100914.

Sirard, John R., William F. Riner, Kerry L. McIver, and Russell R. Pate. 2005. 'Physical Activity and Active Commuting to Elementary School'. *Medicine and Science in Sports and Exercise* 37 (12): 2062–69.

Smith, Liz, Sarah H. Norgate, Tom Cherrett, Nigel Davies, Christopher Winstanley, and Mike Harding. 2015. 'Walking School Buses as a Form of Active Transportation for Children – A Review of the Evidence'. *Journal of School Health* 85 (3): 197–210. https://doi.org/10.1111/josh.12239.

Torres, Juan, and Paul Lewis. 2010. 'Proximité et transport actif: le cas des déplacements entre l'école et la maison'. *Environnement Urbain / Urban Environment*, Volume 4 (September). http://eue.revues.org.lama.univ-amu.fr/760.

Tranter, Paul J., and Karen Malone. 2003. 'Out of Bounds: Insights from Children to Support a Cultural Shift towards Sustainable and Child-Friendly Cities'. In *State of Australian Cities National Conference*, 1–27. Parramatta, NSW.

Turner, Lindsey, Jamie F. Chriqui, and Frank J. Chaloupka. 2013. 'Walking School Bus Programs in U.S. Public Elementary Schools'. *Journal of Physical Activity and Health* 10 (5): 641–45. https://doi.org/10.1123/jpah.10.5.641.

Valentine, Gill, and John McKendrck. 1997. 'Children's Outdoor Play: Exploring Parental Concerns about Children's Safety and the Changing Nature of Childhood'. *Geoforum* 28 (2): 219–35. https://doi.org/10.1016/S0016-7185(97)00010-9.

Vandersmissen, Marie-Hélène. 2011. 'Déplacements d'accompagnement d'enfants en milieu urbain au Québec. Une expérience pénible?' *Articulo*, no. 7 (September). https://doi.org/10.4000/articulo.1824.

Vázquez, Rafa. 2009. 'Hay Que Volver a La Calle Como Escuela, a La Ciudad Como Tribu Que Cuida a Sus Niños'. *Faro de Vigo*, 15 November 2009. http://www.farodevigo.es/portada-pontevedra/2009/11/15/hay-volver-calle-escuela-ciudad-tribu-cuida-ninos/386565.html.

Wang, Youfa, and Tim Lobstein. 2006. 'Worldwide Trends in Childhood Overweight and Obesity'. *International Journal of Pediatric Obesity* 1 (1): 11–25.

Chapter 10

INCORPORATING THE EXTENDED THEORY OF PLANNED BEHAVIOUR IN A SCHOOL TRAVEL MODE CHOICE MODEL: A CASE STUDY OF SHAOXING, CHINA

Jing Peng,[1] Wang Jing,[1] Chen Long[1] and Zha Qi-Fen[2]

[1] School of Automobile and Traffic Engineering, Jiangsu University, Zhenjiang Jiangsu 212013, China

[2] School of Finance & Economics, Jiangsu University, Zhenjiang Jiangsu 212013, China

Introduction

In recent years, children's travel behaviour, including active school transport (AST, such as walking and cycling), has attracted researchers from varying disciplines, such as urban planning, transportation and public health. Previous studies have shown that those who often walk or cycle to and from school are much more active than those who are driven and have more knowledge regarding their neighborhood environment (Mackett 2013). Research has also reported that AST plays a vital role in promoting children's physical activity and can prevent and reduce childhood obesity (Mendoza et al. 2011). Furthermore, AST can contribute to children's physical activity levels and positively impact children's mental and psychological health (Fusco et al. 2012). In addition, it was estimated that as much as 10–14% of morning traffic is generated by parents driving their children to schools (McDonald et al. 2011). Similar trends have been documented in developing countries. It is also found that the traffic congestion indices of two weeks before and after school in Beijing can rise from 3–6 to 6–9 points (above six means moderate or severe congestion). And the capacity of the three-lane road around the school will drop 38% under the influence of student shuttle vehicle trips (Shi et al. 2014).

The problem caused by this traffic congestion on the roads near schools may create hazardous conditions for children traveling by non-motorized means and increase tail gas of automobiles that will contaminate the air that children breathe in and around their school. Despite AST's significant health and environmental implications, AST has declined over the past few decades internationally (Buliung et al. 2011; Witten et al. 2013). For example, in the United States, the rate of AST declined from 47.7% in 1969 to 12.7% in 2009 (McDonald et al. 2011), and the share of children aged 5–9 who walked to school has decreased from 57.7% in 1971 to 25.5% in 2003 in Australia (Van der Ploeg et al. 2008).

In order to reverse the declining trend of AST, it is necessary to understand the motives of the mode choice decision in school travel behaviour. Emerging literature has explored school travel behaviour with a wide range of factors, which have primarily focused on five significant aspects: (1) built environment including home–school distance, neighbourhood walkability and other urban form elements; (2) social environment related to perceived crime danger, children safety and neighbourhood socio-economic status; (3) school characteristics referring to school size, policies and location; (4) household characteristics including the number of cars owned, licensed drivers, household income, children's gender and age, and ethnicity; and (5) psychological concepts such as attitudes, preferences, intentions, beliefs, values and norms. A detailed discussion of influential factors of school travel can be found in existing systematic reviews (Larouche et al. 2014; Lu et al. 2014; Mitra 2012; Pont et al. 2009; Wong et al. 2011).

According to these reviews, most of the literature focuses on a subset of alternative modes, while few relate to complete coverage of alternative modes. Significantly, the electric bike, with impressive sales in China, has been very little taken into consideration as one of the critical school travel modes in literature. For Figure 10.1, we used the data of school children aged 6–18, in 2012 Shaoxing's Household Travel Survey. Because there may be more than one adult in a household, a non-driving adult can have children in the household using other modes to school. Therefore, a proportion of children is driven to school for each type of commuting mode of adults.

From Figure 10.1, we can see that the proportion of children being driven to school is significantly higher when adults from the same household choose the car as commuting mode (40%), than when adults use other commuting modes. Moreover, the figure illustrates that the proportion of household children walking to school is only 30% for adults commuting by car, while 52% for adults walking to work, and 47% for adults using the bike. Interestingly, the amount of children commuting by electric bike almost shares the same proportion (25%) as by bus for households where adults go to work by

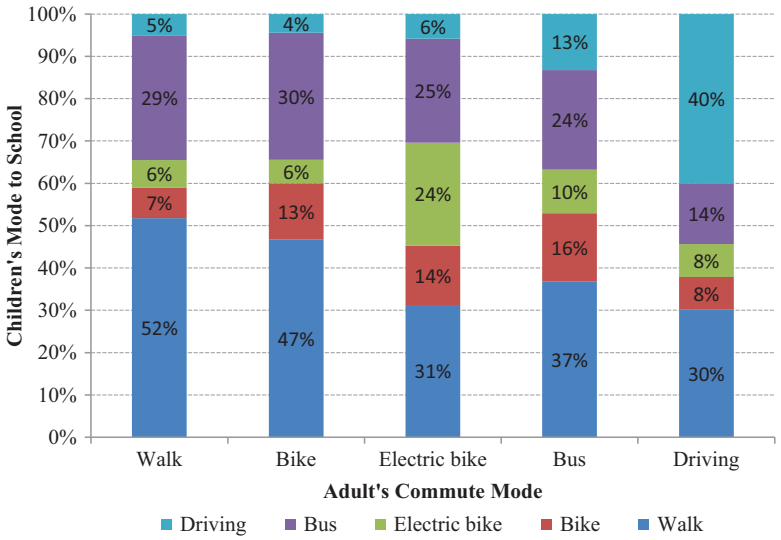


Figure 10.1 School travel modes by commuting travel modes of household adult

electric bike. Furthermore, there are few studies on bringing electric bicycles into the focus of travel mode selection (Buliung et al. 2011; Deka 2013; Faulkner et al. 2010). In China, the electric bicycle is used by a large number of people as a popular means of transportation. Therefore, an electric bicycle is considered in this study.

Despite the explanatory variables or factors mentioned above for modelling school travel varies from study to study, the previous studies highlighted the importance of including adult household members' activities in analysing children's school travel patterns (Deka 2013; Susilo and Liu 2015). For example, Deka demonstrated through Heckman probit models that children's travel mode to school is influenced by parents' travel mode to work, while the relationship is mostly unidirectional (Deka 2013). He also suggested that future studies should consider the travel pattern of household adults when predicting children's mode to school (Deka 2013). McDonald examined the influence of parental employment status and work travel time on children's travel to school by using binary logit model and found that young children (5–14) with mothers who commute to work in the morning are less likely to walk or bike to school, but he only considers modes of walk and bike (McDonald 2008). Yarlagadda and Srinivasan used multinomial logit model (MNL) to analyse the influence of parents' employment and work flexibility on children's travel mode use (Yarlagadda and Srinivasan 2008). He and Giuliano (2015) focused on children aged between 5 and 18 years in dual-earner households and brought together both parents' working

arrangements and spatial variables to model escort-mode decisions about school travel by MNL. They found that the parents, primarily the mothers, increased working hours and more distant job locations resulted in an increased likelihood of several alternative escort-mode (He and Giuliano 2015). Other studies have paid attention to characteristics of parents' influence on how children travel to school (Faulkner et al. 2010; Wen et al. 2008; Yoon et al. 2011). All these studies recognized that the travel patterns of children and adults in a household are interrelated. Still, limited literature involved the adults' characteristics of commuting travel patterns, such as adults' mode, commute time, and psychological factors towards modes. Although a growing body of research illuminates the significant effects of a wide range of individual psychological factors on adult travel behaviour, such as convenience, attitudes and perceptions regarding environmental protection (Walker and Li 2006; Zeid 2009), there is limited literature that examined how these factors affect children's travel behaviour. In addition, theoretical frameworks from literature reviews regarding active travel in youth and children's trips to school did not appear to have fully integrated psychological factors with the built environment and social influence (McMillan 2005; Panter et al. 2008). Some researchers also suggested that prominent psychological constructs such as attitudes, beliefs and social norms have not been explored sufficiently in school travel research (Sirard and Slater 2008). Even those previous studies considering psychological factors may lack theoretical grounding or use theories superficially. The purpose of this chapter is to have a deep understanding of children's school travel behaviour by addressing the gaps mentioned above.

Specifically, an extended theory of planned behaviour (ETPB) is proposed here to delve into the psychological factors caused by the effects of adults' cognition and behavioural habits and work out the factors' relationship paradigm.

The Extended Theory of Planned Behaviour

The most widely applied model of cognitive determinants of choosing travel modes is the theory of planned behaviour (TPB), which suggests that behaviour is most closely determined by an intention to act (Ajzen 1991). Intentions are based on attitude towards the behaviour, subjective norm (SN) and perceived behavioural control (PBC). Intention directly affects behaviour, and, under some circumstances, the same applies to PBC. This theory recognises the importance of background factors, such as personality, emotions, education, age, gender and experience; although if they affect behaviour, it would be via beliefs. The TPBs sufficiency assumption is invalid; in other words,

intention may be determined by attitude, SN, PBC and additional variables (Ajzen 2011). In this study, descriptive norm (DN) and habit as additional predictors of intention and behaviour in TPB were examined because the two variables have been provided enough evidence to satisfy Ajzen's criteria of adding predictors in other behaviour domains (Ajzen 2011; Gardner 2009; Rivis and Sheeran 2003). The ETPB is used as a systematic framework of behavioural theory to organise psychological factors of household adults that have a significant effect on school travel mode choice behaviour and investigate the role of these factors on the process of school mode choice by a Multiple Indicators and Multiple Causes (MIMIC) model.

Data and Analysis

Data description

The empirical analysis of this paper was carried out with data from 2012 Shaoxing's Household Travel Survey. The paper-based survey was conducted in October 2012 in Shaoxing, Zhejiang province, China, with 1,191 km^2, a population of 1.03 million and 128 traffic analysis zones. The dataset from the survey provided household, personal and travel characteristics for 32,364 individuals from 11,290 households. These individuals of different ages and profiles made 70,091 trips, including school travels by children and commute travel by adults. The data used for this paper was restricted to households with at least one child aged between 6 and 18. Adult workers aged between 18 and 24 were diminished to exclude those who might be undergraduates but also make occasional work trips. Only one adult in a household with children answered the attitudinal questions about various travel modes. Five school travel modes are considered: walk, bike, electric bike, bus and car drive. The other modes, such as taxi, were eliminated for they covered less than 5% of all school trips. After extensive data cleaning and filtering, the final dataset for this paper included 1,873 respondents.

In the final dataset used for analysis, the percentage of children walking to school is 33%, the highest compared to going by bike with 11%, electric bike with 17%, bus with 21% and car with 18%. While the most significant difference in school mode share between male and female children is related to electric bike, 14% of male children use an electric bike to school compared to 17% of female children. Among adults in the household, about 36% of men drive to work compared to 23% of women, 8% of men walk to work compared to 12% of women, 16% of men use taxis compared to 4% of women and 30% of men use electric bike compared to 43% of women.

Selection of variables

This paper aims to consider the impact of household adults' commuting travel patterns concerning children's school travel mode choice. The commuting pattern of household adults with children is measured by adults' commuting mode, commuting time, distance from home to the workplace and attitude towards commuting modes. Other factors that impact children's school travel mode choice behaviour are also included in the paper. The independent variables are divided into four groups: (1) household adults' commuting travel pattern and perception of commute modes, (2) household adults' social demographics, (3) children's social demographics and (4) children's school travel behaviour. All these variables are listed in Table 10.1.

Table 10.1 Description of explanatory variables considered in models

Variable	Description	Mean	Std. Dev.
Adults' commuting travel pattern and perception on modes			
Attitude	Attitude towards travel commute modes (latent variable)	–	–
SN	Subjective norm in TPB (latent variable)	–	–
DN	Description norm (latent variable)	–	–
PBC	Perceived behavioural control in TPB (latent variable)	–	–
Habit	Habit of choosing a mode (latent variable)	–	–
Intention	Intention in TPB (latent variable)	–	–
commute_time	commute travel time, minute	18.47	12.95
age	Household adults' age	39.83	5.86
edu	Household adults' education level; 1: primary school; 2: junior middle school; 3: senior high school; 4: graduate; 5: postgraduate	2.30	0.82
Adults' social demographics			
male_adult	1: male adult; 0: female adult	0.61	0.49
salary_low	1: monthly salary is less than 2k RMB; 0: otherwise	0.20	0.40
salary_ref[a]	1: more than 2k and less than 3k; 0: otherwise	0.31	0.46

Table 10.1 (*Continued*)

Variable	Description	Mean	Std. Dev.
salary_middle	1: more than 3k and less than 5k; 0: otherwise	0.33	0.46
salary_high	1: more than 5k; 0: otherwise	0.18	0.39
fam_num	Number of family members	2.90	0.98
car_num	Number of household's cars	0.58	0.68
ebike_num	Number of household's electric bikes	1.29	0.82
bike_num	Number of household's bikes	1.09	0.79
Children's social demographics			
male_child	1: male child; 0: otherwise	0.42	0.49
children	1: more than one child in the household; 0: otherwise	0.20	0.40
age_0610	1: Children aged between 6 and 10; 0: otherwise	0.18	0.38
age_1112[a]	1: Children aged between 11 and 12; 0: otherwise	0.47	0.50
age_1314	1: Children aged between 13 and 14; 0: otherwise	0.27	0.44
age_1518	1: Children aged between 15 and 18; 0: otherwise	0.09	0.29
dis_school	Distance between home and school, km	4.80	4.64
Children's school travel choice			
school_walk	1: Children walk to school; 0: otherwise	0.33	0.47
school_bike	1: Children cycle to school; 0: otherwise	0.11	0.32
school_ebike	1: Children go to school by electric bike; 0: otherwise	0.16	0.37
school_bus[a]	1: Children go to school by bus; 0: otherwise	0.21	0.41
school_car	1: Children are driven to school; 0: otherwise	0.18	0.39
school_active	1: Children cycle or walk to school; 0: otherwise	0.45	0.50

[a] Reference group for independent variables.

Some dummy variables on household income were introduced based on the expectation that children from higher-income households would be more likely to go to school by car and less likely to take the bus, walk or cycle. Whether a household has more than one child aged between 6 and 18 was regarded as a dummy variable with the expectation that having more family children would increase the likelihood of walking or cycling to school. The number of cars, bikes and electric bikes in a household were regarded as exogenous variables in the models of this paper, with the expectation that vehicle type has a significant favourable influence on the same school travel mode.

Children's school travel is related to their age and gender, as well as household characteristics. The age of children is constantly reported to have a strong association with the likelihood of AST (Johansson et al. 2011; McDonald 2008). Older children are more likely to go to school by active travel modes like walking and cycling. Children's gender may also affect school travel behaviour. Adults in a household are likely to be more concerned about the travel safety of girls (Zwerts et al. 2010).

Distance from home to school is a critical variable that plays an essential role in children's school travel mode. Previous studies reported that children were less likely to walk or cycle to school when distance increased (Babey et al. 2009; Emond and Handy 2012).

Attitudes towards the three inner-city travel modes, namely electric bike, bus and car, were accessed by a combination of behavioural beliefs and outcome evaluation. Initially, the respondents were solicited to rate the consequences of using the three travel modes and three different behavioural beliefs on a five-point scale (1 = strongly disagree, 5 = strongly agree). With all the modes, the extent to which using that particular mode would improve their fitness level, making them feel free and relaxed. The importance of each consequence was evaluated on a five-point scale (1 = not at all important to me, 5 = very important to me) to give the outcome evaluations. Before combining the behavioural beliefs and outcome evaluations into measures of attitudes towards the three modes, positive consequences were coded again to make sure those higher values on all behavioural beliefs indicated a more positive belief. Take attitude towards electric bikes, for example. Principle components analysis identified just one component accounting for 86% of the variance (eigenvalue of 1.72). Cronbach's alpha (α) was 0.84, indicating strong inner consistency.

Two indicators measured the two types of social norms for both SN and DN. For SNs, the items 'My best friends consider using the electric bike / using the bus / using the car to be …' and 'My family / relative consider using the electric bike / using the bus/ using the car to be …'

were assessed on a five-point scale ranging from entirely unacceptable to completely acceptable. The items were recoded so that a high value indicated a stronger SN. Take the electric bike, for example. Principle components analysis identified a single coherent component, accounting for 83% of the variance (eigenvalue of 1.66). Cronbach's alpha was lower than that for intention ($\alpha = 0.80$) but still indicates strong internal consistency.

The items measured DNs: 'My closet friends will themselves use the electric bike / use the bus / use the car' and 'My family / relative will themselves use the electric bike / use the bus / use the car' and rated a five-point scale from strongly disagree to strongly agree. After recording the items, a high value indicated a descriptive solid norm. Again, principal components analysis of DNs on electric bike revealed one component accounting for 79% of the variance (eigenvalue = 1.57). Cronbach's alpha indicated moderate internal consistency, again in line with expectations for such a belief-based aggregate, $\alpha = 0.73$.

Direct measures of PBC were used, including three items for each mode: (1) 'It is mainly up to me whether I choose the inner city travel mode or not'; (2) 'To use the travel mode on my ordinary trip is difficult'; and (3) 'It will make me feel trouble to choose the travel mode'. All three items were evaluated on a five-point scale ranging from strongly disagree to strongly agree. Subsequently, the items were recoded so that a higher value indicated a higher PBC. These items for electric bikes formed one component in a principal components analysis accounting for 66% of the variance (eigenvalue = 1.33). Cronbach's alpha (α) was 0.50, indicating reasonable inner consistency. Nunnally suggested that $\alpha = 0.70$ represents strong inner consistency (Nunnally and Bernstein 1967). However, Cortina urges researchers to consider the number of items used – a moderate alpha with a small number of items may well represent better internal consistency than a larger alpha with a more significant number of items (Cortina 1993; Rhodes et al. 2004). Ajzen (2002) suggests that a requirement for high internal consistency for belief-based measures is not necessary, given that the aggregate of differing beliefs forms an attitude. The result of principal components analysis shows that the aggregated factors forming a unitary component are an essential justification for aggregation.

Behaviour intention was assessed separately for different travel modes by a mean of three items: (1) 'It is likely that I will choose the inner city travel mode in the future'; (2) 'I would expect to use the travel mode in the next time'; and (3) 'Within the next coming one month I have the intention to use the travel mode'. All items were evaluated on a five-point scale (1 = completely impossible, 5 = completely possible). After recording the items, a higher value signified a stronger intention to use that particular intercity travel mode.

Principle components analysis identified just one component accounting for 85% of the variance (eigenvalue of 1.71). Cronbach's alpha (α) was 0.82, indicating strong inner consistency.

The habit was measured using a ten-item version of Verplanken and Orbell's Self-Report Habit Index (Verplanken and Orbell 2003). Each item related to 'Choosing the travel mode on the inner-city trip' (e.g. 'Choosing the electric bike on the commute trip is something I do automatically', 'Choosing the electric bike on the commute trip is something I do without having to remember consciously') and was measured on a five-point scale (1 = strongly disagree, 5 = strongly agree; α = 0.90). The indexes of reliability and validity are listed in Table 10.2.

Table 10.2 Measurements of reliability and validity

Variables	Percentage of one component accounting for the variance	Eigenvalue	Cronbach's alpha (α)	Average variance extracted
Electric bike				
Attitude	86.23	1.72	0.84	0.70
SN	83.18	1.66	0.80	0.67
DN	78.61	1.57	0.73	0.57
PBC	66.31	1.33	0.50	0.50
Habit	72.63	3.63	0.90	0.66
Intention	85.32	1.71	0.82	0.70
Bus				
Attitude	81.28	1.63	0.77	0.60
SN	79.94	1.60	0.75	0.60
DN	74.40	1.49	0.66	0.51
PBC	61.85	1.31	0.46	0.52
Habit	57.45	2.87	0.81	0.56
Intention	83.00	1.66	0.80	0.65
Car				
Attitude	85.85	1.72	0.83	0.63
SN	81.59	1.63	0.77	0.64
DN	76.12	1.52	0.69	0.53
PBC	74.53	1.37	0.54	0.52
Habit	70.09	3.50	0.89	0.63
Intention	81.56	1.63	0.77	0.69

Model and Estimation

An MIMIC model is used to examine the complicated interrelationships among the TPB's latent variables of adults and children's school travel mode choice with the socio-economic status variables. Regarding the multivariate regression of the indicators on the causes, the model implies restrictions of two types: (1) the regression coefficient matrix has ranked one and (2) the residual variance–covariance matrix satisfies a factor analysis model with one common factor. The MIMIC model is a particular form of structural equation modelling. The specification of the model is as follows:

$$\boldsymbol{\eta} = \Gamma \mathbf{x} + \zeta \tag{1}$$

$$\mathrm{y} = \Lambda \boldsymbol{\eta} + \varepsilon \tag{2}$$

where (1) is a structural equation and (2) is a measurement equation. The latent variable vector $\boldsymbol{\eta}$ is linearly determined, subject to disturbances $\boldsymbol{\zeta}$, by the vector of observable exogenous causes $\mathbf{x}$. The latent variable determines, linearly, subject to disturbance $\boldsymbol{\varepsilon}$, vector of observable endogenous indicators $\mathbf{y}$. $\boldsymbol{\Gamma}$ and $\boldsymbol{\Lambda}$ are matrices of unknown parameters to be estimated. The operational implications of the model appear when we solve for the reduced-form relation connecting the observables:

$$\mathbf{y} = \Lambda\left(\Gamma \mathbf{x} + \zeta\right) + \varepsilon = \Pi \mathbf{x} + \mathbf{v} \tag{3}$$

where the reduced-form coefficient matrix is

$$\Pi = \boldsymbol{\Lambda}\boldsymbol{\Gamma} \tag{4}$$

and the reduced-form disturbance vector is

$$\mathbf{v} = \Lambda\zeta + \varepsilon \tag{5}$$

Estimating a structural equation latent variable model minimises the difference between the sample covariance matrix, $\mathbf{S}$, and the covariance matrix $\boldsymbol{\Sigma}$. The elements of $\boldsymbol{\Sigma}$ are hypothesised to be a function of the parameter vector $\boldsymbol{\theta}$ so that $\boldsymbol{\Sigma} = \boldsymbol{\Sigma}(\theta)$. The parameters are estimated so that the discrepancy between S and the implied covariance matrix $\boldsymbol{\Sigma}(\hat{\theta})$ is minimal. The discrepancy function, $F = F(\mathbf{S}, \boldsymbol{\Sigma}(\theta))$, measures the discrepancy between S and $\boldsymbol{\Sigma}(\theta)$ evaluated at $\hat{\theta}$. $F_{\min}$ is the minimum value of the discrepancy function and equals zero only if $\mathbf{S} = \boldsymbol{\Sigma}(\hat{\theta})$. An indication of model fit is, therefore, given by the closeness of the $F_{\min}$ to zero. The supposition is that disturbances are all mutually independent. For convenience, all variables are taken to have expectation zero.

$$E(\zeta\varepsilon') = 0,\ E(\zeta^2) = \sigma^2,\ E(\varepsilon\varepsilon') = \Theta^2 \tag{6}$$

where $\boldsymbol{\Theta}$ is the diagonal matrix with θ, the vector of standard deviations of the $\boldsymbol{\varepsilon}$'s, displayed on its diagonal; the covariance matrix can be computed by (7):

$$\sum(\hat{\theta}) = E(\mathbf{vv}') = \sigma^2\Lambda\Lambda' + \Theta^2 \tag{7}$$

The multiple indicator part of the MIMIC model is a confirmatory factor analytical model specified. The multiple cause part of the model is given by

$$\begin{aligned}\eta_{li} &= \gamma_{l1} male\_adult_i + \gamma_{l2} salary\_low_i + \gamma_{l3} salary\_middle_i \\ &\quad + \gamma_{l4} salary\_high_i + \gamma_{l5} fam\_num_i + \gamma_{l6} car\_num_i \\ &\quad + \gamma_{l7} bike\_num_i + \gamma_{l8} ebike\_num_i + \gamma_{l8} edu_i + \zeta_i \\ l &= Attitude, SN, DN, PBC, Intention, Habit\end{aligned} \tag{8}$$

Figure 10.2 illustrates the structure of the MIMIC model. Structural equation and measurement equation are alleviated to SE and ME in Figure 10.3.

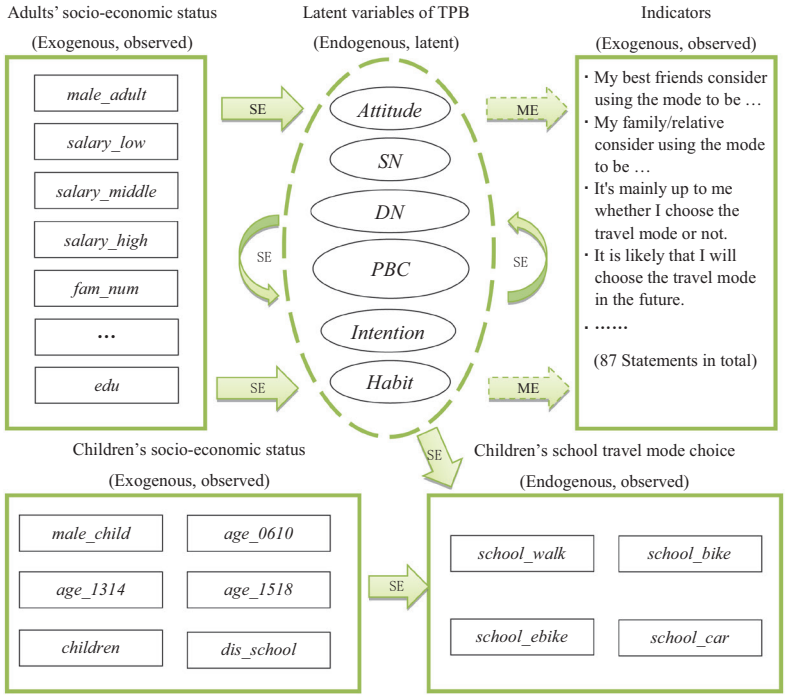


Figure 10.2 Multiple Indicators and Multiple Causes (MIMIC) model

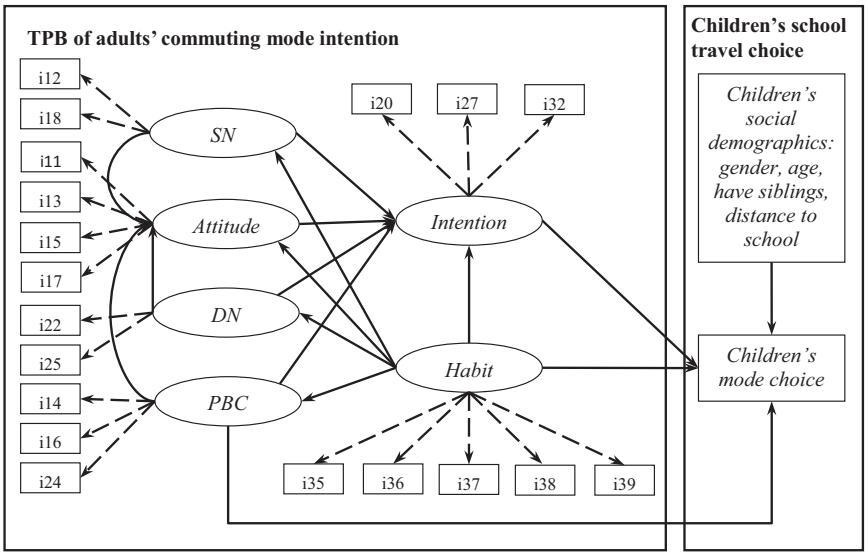


Figure 10.3 Detailed path analysis diagram

As illustrated in Figure 10.2, the MIMIC model includes the demographic characteristics of travellers, the latent variables that construct the expanded TPB and observed endogenous indicators. Specifically, this model hypothesises that the socio-economic variables influence all latent variables of TPB, which are also explained by indicators from questionnaires for respondents. Figure 10.6 specifies the hypothesised relationships among the latent factors, where ellipses represent unobservable variables and rectangles represent observable indicators. Dashed arrows represent measurement equations, while solid arrows represent structural equations. The latent variable model describes the relationships between the latent variables and their indicators and causes.

The MIMIC model simultaneously estimates the measurement equations relating each factor to its indicators, and the structural equations specify the relationships among latent factors and between them and socio-economic status variables. The estimation of the MIMIC model was conducted in a statistical software package named STATA. Table 10.3 summarises the overall goodness-of-fit statistics.

Most interpreters of the root mean squared error of approximation (RMSEA) test label the fit close if the lower bound of the 90% CI is below 0.05 and label the fit poor if the upper bound is above 0.10. CFI and TLI are two indices such that a value close to 1 indicates a good fit. CFI stands for comparative fit index. TLI stands for Tucker–Lewis index and is also known

Table 10.3 Goodness-of-fit statistics for MIMIC model

Adults' perception about mode	**Car**		**Ebike**		**Bus**	
Children's school mode	**Active**	**Car**	**Active**	**Ebike**	**Active**	**Bus**
RMSEA	0.048	0.048	0.044	0.044	0.044	0.044
CFI	0.915	0.915	0.937	0.935	0.899	0.894
TLI	0.881	0.881	0.915	0.913	0.865	0.858
SRMR	0.038	0.039	0.037	0.037	0.034	0.034

as the non-normed fit index. A perfect fit corresponds to a standardised root mean squared residual (SRMR) of 0. A good fit is a small value, considered by some to be limited to 0.08. CFI for adults' perception towards bus when children go to school by electric bike is 0.894, slightly below 0.9, but SRMR is below 0.05, and in particular, the whole 90% confidence interval is between 0.027 and 0.030, which falls below 0.05, so the overall data fit is acceptable; that is, the model cannot reject the hypothesis of the relationships among the latent factors and between them and demographic variables specified in Figure 10.2.

Results

Based on the results from the six MIMIC models, the relationships were examined between the demographic characteristics variables and the latent variables in TPB and within them. Table 10.4 shows the estimation results.

Table 10.4 shows that the psychological factors of household adults on different commuting modes, such as Intention, PBC and Habit, have various impacts on children's school travel mode choice behaviour. The following section will discuss adults' latent variables' influence on commuting modes on school travel modes.

Table 10.4 illustrates that children's gender significantly impacts children's going to school by electric bike and active mode. In the MIMIC model for children's using an electric bike, boys significantly negatively influence school travel. Girls are more likely to be escorted to school by adults who have a significant habit of using electric bikes. Table 10.4 also shows that boys are more likely to walk or cycle to school than female children, having a significant positive influence on active school mode, which was reported by a previous study (McMillan et al. 2006). Compared to Deka's finding that male children are less likely to be driven to school than female children (Deka 2013), our study indicates that children's gender has no significant association with being driven to school.

Table 10.4 Estimation results; *$p < 0.05$; **$p < 0.01$

Adults' latent variables on mode	Car		Electric bike		Bus	
	Coef.	***z***	**Coef.**	***z***	**Coef.**	***z***
school_car						
PBC	**–0.11****	–3.21				
Habit	**0.30****	7.55				
Intention	0.08	1.75				
male_child	–0.02	–0.88				
age_0610	**0.06****	2.91				
age_1314	**–0.07****	–3.29				
age_1518	**–0.10****	–4.78				
dis_school	**0.28****	14.71				
ch_trip_num	0.03	1.75				
children	**–0.08****	–3.87				
_cons	**–**0.03	–0.27				
school_ebike						
PBC			**–0.60****	–4.01		
Habit			**0.30****	4.68		
Intention			**0.47****	3.96		
male_child			**–0.04***	–2.04		
age_0610			0.04	1.72		
age_1314			**–0.12****	–5.05		
age_1518			**–0.09****	–3.80		
dis_school			–0.03	–1.52		
ch_trip_num			**–0.07****	–2.95		
children			0.00	–0.11		
_cons			**0.67****	4.29		
school_bus						
PBC					**0.17****	4.59
Habit					0.01	0.16
Intention					0.02	0.54
male_child					0.01	0.53

(*Continued*)

Table 10.4 (*Continued*)

Adults' latent variables on mode	Car		Electric bike		Bus	
	Coef.	***z***	**Coef.**	***z***	**Coef.**	***z***
age_0610					**–0.05***	–2.03
age_1314					0.00	–0.18
age_1518					0.01	0.35
dis_school					**0.42****	23.06
ch_trip_num					0.01	0.11
children					0.01	–0.06
_cons					0.13	1.40
school_active						
PBC	0.06	1.40	**–0.56****	–2.85	–0.01	–0.46
Habit	**–0.12***	–2.90	0.12	1.73	0.05	1.41
Intention	0.04	0.76	**0.43****	2.86	–0.01	–0.40
male_child	**0.05***	2.51	**0.05****	2.78	0.05*	2.50
age_0610	**–0.05***	–2.25	**–0.05***	–2.32	**–0.05***	–2.34
age_1314	**0.16****	7.95	**0.16****	8.08	**0.16****	7.98
age_1518	**0.14****	6.99	**0.14****	7.03	**0.14****	7.11
dis_school	**–0.53****	–34.39	**–0.53****	–33.63	**–0.54****	–34.65
ch_trip_num	0.01	0.57	0.01	0.28	0.01	0.37
children	**0.06****	3.27	**0.05***	2.43	**0.06****	3.09
_cons	**1.26****	16.36	**1.36****	8.88	**1.24****	16.73

Most of the age category's variables are significantly associated with school travel mode. For being driven to school, children aged between 6 and 10 have a significant favourable influence, and those who are more than 13 have a negative impact, which means that younger children are more likely to be driven to school than older children. Children aged 13–14 and 15–18 are less likely to go to school by electric bike. Overall, probably due to safety concerns, younger children are more likely to be escorted to school by car and electric bike and less likely to walk or cycle to school than older children, as shown by previous research.

The distance between the children's homes and their schools influences whether the school travel mode is motorised. For the MIMIC model of school travel by car and bus, the distance from home to school significantly influences school travel mode choice. Furthermore, for active school mode, the distance

has a negative impact. Due to electric bike having flexible travel distances, the distance from home to school is not associated with the electric bike mode.

Children's numbers of trips only have one negative significant relationship with school travel mode on electric bike. Children who have more social activities are less likely to travel to school by electric bike and are often escorted by adults.

Some families have more than one child, which may lead to the likelihood that the school trip made by a child with siblings is independent travel without an adult companion. Therefore, the child with siblings has a significant negative impact on being driven to school and positively influences active school mode. Evidence from Table 10.4 found that having other school-age children in a household increases the propensity of walking or bicycling and decreases the likelihood of being driven to school, which is in line with previous studies (Deka 2013; Susilo and Liu 2015).

Interactions of household adults' latent variables towards school travel mode

The significant interrelationships among the adults' latent factors are summarised in Figures 10.4–10.6, which shows the standardised coefficients (z-statistics in parentheses) between latent factors in the path diagram. * Indicates $p < 0.05$; ** Indicates $p < 0.01$.

The three figures above illustrate that the MIMIC models with the expanded TPB account for 77–89% of the variance of intention to use the three intercity travel modes, which is consistent with Bamberg's previous finds (Bamberg et al. 2003). In Bamberg's research, the models with the introduction of

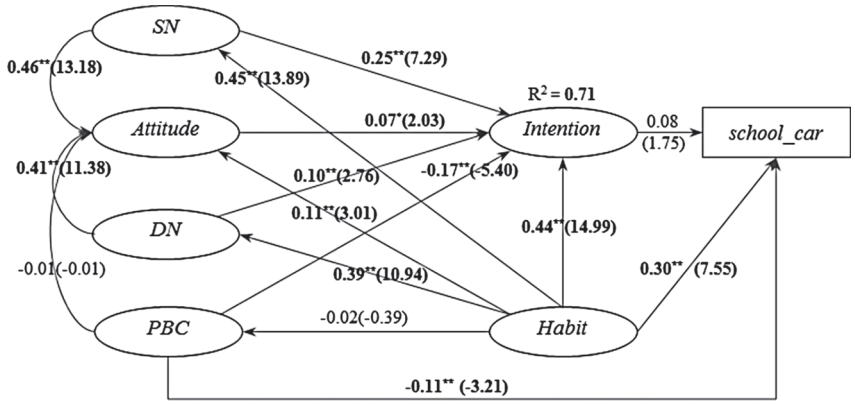


Figure 10.4 Standardised coefficients for adults' TPB variables of car on driving to school

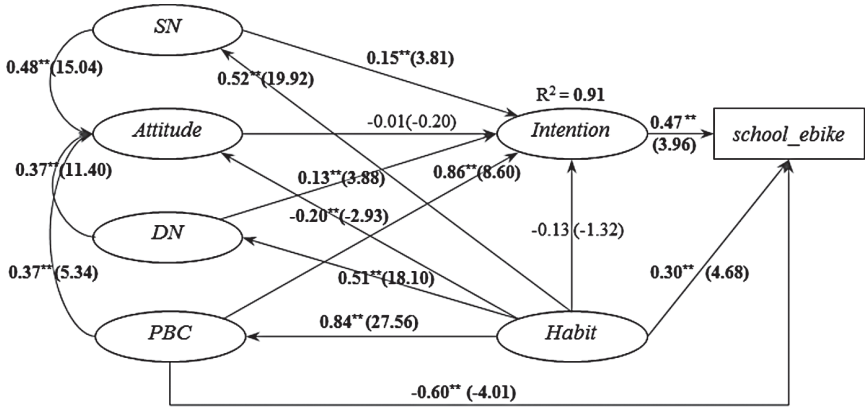


Figure 10.5 Standardised coefficients for adults' TPB variables on the go to school by electric bike

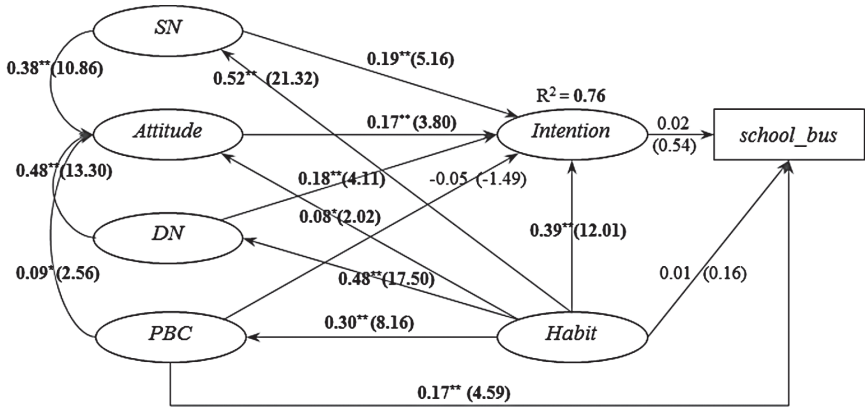


Figure 10.6 Standardised coefficients for adults' TPB variables on the go to school by bus

habit account for 77% and 80% of the variances in intention to choose the bus and car. Although there are distinctions between the two types of research, such as travel modes and latent factors, the amounts of expanded variances in intention to choose between modes imply that the extending TPB can be fitted with the commute mode choice in the Chinese city of Shaoxing.

In the three MIMIC models, SNs and DNs significantly impact attitude at the individual 0.1% level, which indicates that the commuter's fondness for a particular commute mode is affected by social expectations. Except for the mode of car, PBC has a significant positive effect on

Table 10.5 The indirect effect of latent variables on children's school travel behaviour

Children's school travel mode	Car	Electric bike	Bus
SN	**0.011**(7.85)**	**0.029**(3.64)**	**0.03**(6.68)**
DN	**0.005**(3.54)**	**0.029**(3.75)**	**0.02**(5.64)**
Attitude	**0.003*(2.03)**	–0.03(0.85)	**0.02**(3.77)**

attitude towards using electric bikes and buses. The commuter's self-confidence plays an essential role in taking the bus or riding an electric bike. In the three MIMIC models, SNs and DNs significantly influence adults' intention regarding commuting modes directly and on children's school travel behaviour indirectly, as shown in Table 10.5.

Habit has a significant positive effect on all the other latent variables of TPB in the MIMIC model for buses, which indicates that bus is the residents' traditional commuter mode and the other predictors of TPB, including attitude, SN, DN, PBC and intention, may be driven by the habit of taking buses in Shaoxing, China. In the MIMIC model for electric bikes, habit has a significant positive impact on PBC which refers to people's perception of the ease or difficulty of performing the behaviour of interest. Therefore, those accustomed to driving electric bikes may believe that the traffic tool is a convenient transport vehicle that is easy to use. Interestingly, habit has a significant negative effect on PBC in the model for the car. The phenomenon that drivers in the city always encounter traffic congestion may explain the relationship between habit and PBC.

PBC is significantly associated with children's school travel behaviour in all three MIMIC models. Still, the latent variable refers to PBC in TPB has a negative effect on children's school travel with cars and electric bikes and a positive on buses. This may have resulted from household adults' perception of feeling relaxed when escorting their children to school by bus compared to driving a car or riding an electric bike by themselves and always paying attention to the complicated situation on the way. Habit has almost the same positive significant impact on children's being driven or using an electric bike to school. That implies that cars and electric bikes, as the most common motorised traffic tools used by residents in China, have also become the standard escorting vehicles for children to school. Intention of using an electric bike refers to the proximal determinant of adults' commuting travel behaviour, which is the only latent that has a significant positive influence on children's school travel behaviour. The relationship shows that electric

bike plays an essential role in both adults' commuting travel behaviour and children's school travel in China.

The indirect effect of adults' demographics on children's school travel behaviour

Table 10.6 shows the indirect effect of adults' demographics on children's school travel behaviour.

Since several studies reported that women often show more significant concerns about traffic and street safety for themselves. Hsu and Saphores (2014) hypothesised and proved that mothers usually have more significant concerns about letting their children walk or cycle to school, which in turn affects their children's school travel mode. Furthermore, Susilo and Liu (2015) concluded that the effect of mothers' car use on the children's travel mode shares is more apparent than fathers'. However, the male adult variable is positively related to children's school travel mode on car indirectly and have negative impacts on children's being driven to school by electric bike and active modes indirectly. That indicates that men are more likely to drive their children to school and less likely to escort children to school by electric bike or active mode. The phenomenon opposed to

Table 10.6 Indirect effect of adults' demographics on children's school travel behaviour

	school_car		***school_ebike***		***school_bus***	
Adults' demographics	**Coef.**	***z***	**Coef.**	***z***	**Coef.**	***z***
male_adult	**0.030****	4.400	**–0.026***	–2.210	–0.008	–1.340
salary_low	0.006	0.740	0.024	1.590	–0.004	–0.610
salary_middle	**0.022****	2.960	0.001	0.060	0.006	0.940
salary_high	**0.067****	6.410	**–0.040***	–2.490	0.010	1.130
fam_num	–0.004	–1.180	0.004	0.820	0.001	0.380
car_num	**0.131****	15.100	**–0.040****	–4.380	**–0.021****	–3.650
ebike_num	**–0.011****	–2.630	**0.043****	4.430	0.001	0.010
bike_num	–0.002	–0.450	**–0.018****	–2.600	**0.007***	2.240
commute_time	0.001	0.730	–0.001	–2.090	0.001	1.020
trip_num	0.005	1.780	**0.013***	2.450	–0.003	–1.340
edu	**0.016****	3.770	–0.003	–0.490	**–0.010***	–2.300
age	**–0.002****	–2.860	0.001	0.800	0.001	0.570

developed countries may have resulted from China's giant electric bike share. In the dataset of this study, almost 37% of respondents choose electric bikes as their commuting mode. And from Figure 10.5, evidence shows that the habit of electric bikes plays a vital role in adults' perception of commuting modes and children's school travel modes. Table 10.5 shows that adults' monthly salary higher than 5000 CNK has a significant positive correlation with driving to school and negative impacts on going to school by electric bike and active modes. Because higher-income households have more travel resources and are more likely to live further from work, increasing location constraints would promote more private car escort trips. This is in line with He and Giuliano's 2015 study. The number of electric bikes is positively related to children's school travel with electric bikes, in line with our expectations. Interestingly, the number of adults' trips has a significant positive relationship with children driving to school by electric bike, indicating that those households with more activities are more likely to use electric bikes to escort their children. In addition, both adults' education level and age significantly impact children's drive to school.

Conclusion

The paper constructs the extending TPB with the psychological factors related to escort commute mode and investigates the effects of the demographical characteristics of participants on school travel behaviour. The school travel mode choice and commute mode intention of the three travel modes in Shaoxing can be explained by the predictors of TPB. Moreover, DNs and habit may increase significantly explained variance in intention. Primarily, the introduction of habit in analyses results in the most significant incremental explained variance in intention. The paper also constructs the MIMIC models to research the relationship between demographic characteristics and the latent factors of the expanded TPB. The results show that household adults' social-economic statuses have different significant impacts on the latent factors directly and school travel behaviour indirectly. We find that not all the psychological latent variables have a significant effect on the school mode choice behaviour, but habit plays an essential role in choosing cars and electric bikes as school travel mode. Therefore, in order to guide the school travel mode choice, we should research the factors and processes of forming the habit for cars and electric bikes, and make traffic demand strategy according to how to bring up the habit, which may be our future work to study the school travel behaviour from the aspect of psychological factors. In addition, the analyses among the latent factors in the expanded TPB verify the theory's suitability of school travel mode choice and increase the understanding of

the role of DNs and habit in TPB. Based on the understanding and the different demographic statistical characteristics, transportation planners could design socially desirable sustainable transportation policies and practical measures for the intervention of school travel behaviour.

Acknowledgment

The first author wants to express his gratitude to all the workmates of the research for their helpful suggestions and patient guidance. This research was supported financially by the National Natural Science Foundation of China (grant no: 71871107).

References

Ajzen, Icek. 'The theory of planned behavior'. *Organizational behavior and human decision processes* 50, no. 2 (December 1991): 179–211. https://doi.org/10.1016/0749-5978(91)90020-T.

Ajzen, Icek. 'Residual effects of past on later behavior: Habituation and reasoned action perspectives'. *Personality and social psychology review* 6, no. 2 (May 2002): 107–22. https://doi.org/10.1207/S15327957PSPR0602_02.

Ajzen, Icek. 'The theory of planned behaviour: Reactions and reflections'. *Psychology & health* 26, no. 9 (September 2011): 1113–27. https://doi.org/10.1080/08870446.2011.613995.

Babey, Susan H., Theresa A. Hastert, Winnie Huang, and E. Richard Brown. 'Sociodemographic, family, and environmental factors associated with active commuting to school among US adolescents'. *Journal of public health policy* 30 (2009): S203–20. https://doi.org/10.1057/jphp.2008.61.

Bamberg, Sebastian, Icek Ajzen, and Peter Schmidt. 'Choice of travel mode in the theory of planned behavior: The roles of past behavior, habit, and reasoned action'. *Basic and applied social psychology* 25, no. 3 (2003): 175–87. https://doi.org/10.1207/S15324834BASP2503_01.

Buliung, Ron, Guy Faulkner, Theresa Beesley, and Jack Kennedy. 'School travel planning: Mobilizing school and community resources to encourage active school transportation'. *Journal of school health* 81, no. 11 (November 2011): 704–12. https://doi.org/10.1111/j.1746-1561.2011.00647.x.

Cortina, Jose M. 'What is coefficient alpha? An examination of theory and applications'. *Journal of applied psychology* 78, no. 1 (1993): 98–98. https://doi.org/10.1037/0021-9010.78.1.98.

Deka, Devajyoti. 'An explanation of the relationship between adults' work trip mode and children's school trip mode through the Heckman approach'. *Journal of transport geography* 31 (2013): 54–63. https://doi.org/10.1016/j.jtrangeo.2013.05.005.

Emond, Catherine R., and Susan L. Handy. 'Factors associated with bicycling to high school: Insights from Davis, CA'. *Journal of transport geography* 20, no. 1 (January 2012): 71–79. https://doi.org/10.1016/j.jtrangeo.2011.07.008.

Faulkner, Guy, Vanessa Richichi, Ronald N. Buliung, Caroline Fusco, and Fiona Moola. 'What's "quickest and easiest?": Parental decision making about school trip mode'. *International journal of behavioral nutrition and physical activity* 7, no. 62 (August 2010): 1–11. https://doi.org/10.1186/1479-5868-7-62.

Fusco, Caroline, Fiona Moola, Guy Faulker, Ron Buliung, and Vanessa Richichi. 'Toward an understanding of children's perceptions of their transport geographies active school travel and visual representations of the built environment'. *Journal of transport geography* 20, no. 1 (January 2012): 62–70. https://doi.org/10.1016/j.jtrangeo.2011.07.001.

Gardner, Benjamin. 'Modelling motivation and habit in stable travel mode contexts'. *Transportation research Part F: Traffic psychology and behaviour* 12, no. 1 (January 2009): 68–76. https://doi.org/10.1016/j.trf.2008.08.001.

He, Sylvia Y., and Genevieve Giuliano. 'Factors affecting children's journeys to school: A joint escort-mode choice model'. *Transportation* 44, no.1 (July 2015): 1–26. https://doi.org/10.1007/s11116-015-9634-x.

Hsu, Hsin-Ping, and Jean-Daniel Saphores. 'Impacts of parental gender and attitudes on children's school travel mode and parental chauffeuring behavior: Results for California based on the 2009 National Household Travel Survey'. *Transportation* 41, no. 3 (May 2014): 543–65. https://doi.org/10.1007/s11116-013-9500-7.

Johansson, Klara, Lucie Laflmme, and Marie Hasselberg. 'Active commuting to and from school among Swedish children-a national and regional study'. *The European journal of public health* 22, no 2 (April 2011): 209–14. https://doi.org/10.1093/eurpub/ckr042.

Larouche, Richard, Adewale L. Oyeyemi, Antonio Prista, Vincent Onywera, Kingsley K. Akinroye, and Mark S. Tremblay. 'A systematic review of active transportation research in Africa and the psychometric properties of measurement tools for children and youth'. *International journal of behavioral nutrition and physical activity* 11 (October 2014): 129–47. https://doi.org/10.1186/s12966-014-0129-5.

Lu, Wenhua, E. Lisako, J. McKyer, Chanam Lee, Patricia Goodson, Marcia G. Ory, and Suojin Wang. 'Perceived barriers to children's active commuting to school: A systematic review of empirical, methodological and theoretical evidence'. *The international journal of behavioral nutrition and physical activity* 11, no. 1 (November 2014): 140–60. https://doi.org/10.1186/s12966-014-0140-x.

Mackett, Roger L. 'Children's travel behaviour and its health implications'. *Transport policy* 26 (March 2013): 66–72. https://doi.org/10.1016/j.tranpol.2012.01.002.

McDonald, Noreen C. 'Children's mode choice for the school trip: The role of distance and school location in walking to school'. *Transportation* 35, no. 1 (February 2008): 23–35. https://doi.org/10.1007/s11116-007-9135-7.

McDonald, Noreen C. 'Household interactions and children's school travel: The effect of parental work patterns on walking and biking to school'. *Journal of transport geography* 16, no. 5 (September 2008): 324–31. https://doi.org/10.1016/j.jtrangeo.2008.01.002.

McDonald, Noreen C., Austin L. Brown, Mauren M. Marchetti, and Margo S. Pedroso. 'US school travel, 2009: An assessment of trends'. *American journal of preventive medicine* 41, no. 2 (August 2011): 146–51. https://doi.org/10.1016/j.amepre.2011.04.006.

McMillan, Tracy. 'Urban form and a child's trip to school: The current literature and a framework for future research'. *Journal of planning literature* 19, no. 4 (May 2005): 440–56. https://doi.org/10.1177/0885412204274173.

McMillan, Tracy, Kristen Day, Merlon Boarnet, Mariela Alfonzo, and Craig Anderson. 'Johnny walks to school-does Jane? Sex differences in children's active travel to school'. *Children youth and environments* 16, no. 1 (2006): 75–89.

Mendoza, Jason A., Kathy Watson, Tom Baranowski, Theresa A. Nicklas, Doris K. Uscanga, and Marcus J. Hanfling. 'The walking school bus and children's physical

activity: A pilot cluster randomized controlled trial'. *Pediatrics* 128, no. 3 (September 2011): e537–44. https://doi.org/10.1542/peds.2010-3486.

Mitra, Raktim. 'Independent mobility and mode choice for school transportation: A review and framework for future research'. *Transport reviews* 33, no. 1 (November 2012): 21–43. https://doi.org/10.1080/01441647.2012.743490.

Nunnally, Jum C., and Ira H. Bernstein. *Psychometric theory*. New York: McGraw-Hill, 1967.

Panter, Jenna R., Andrew P. Jones, and Esther MF van Sluijs. 'Environmental determinants of active travel in youth: A review and framework for future research'. *International journal of behavioral nutrition and physical activity* 5, no. 1 (June 2008): 34–49. https://doi.org/10.1186/1479-5868-5-34.

Pont, Karina, Jenny Ziviani, David Wadley, Sally Bennett, and Rebecca Abbott. 'Environmental correlates of children's active transportation: A systematic literature review'. *Health & place* 15, no. 3 (September 2009): 849–62. https://doi.org/10.1016/j.healthplace.2009.02.002.

Rhodes, Ryan E., Ronald C. Plotnikoff, and John C. Spence 'Creating parsimony at the expense of precision? Conceptual and applied issues of aggregating belief-based constructs in physical activity research'. *Health education research* 19, no. 4 (September 2004): 392–405. https://doi.org/10.1093/her/cyg043.

Rivis, Amanda, and Paschal Sheeran. 'Descriptive norms as an additional predictor in the theory of planned behaviour: A meta-analysis'. *Current psychology* 22, no. 3 (September 2003): 218–33. https://doi.org/10.1007/s12144-003-1018-2.

Shi, Jin, Meiying Jian, and Wenyan Zhang. 'Study on the influence of student shuttle vehicle on Beijing road traffic'. *Journal of Wuhan University of Technology* 38, no. 5 (2014): 960–64. https://doi.org/10.3963/j.issn.2095-3844.2014.05.005.

Sirard, John R., and Megan E. Slater. 'Walking and bicycling to school: A review'. *American journal of lifestyle medicine* 2, no. 5 (September 2008): 372–96. https://doi.org/10.1177/1559827608320127.

Susilo, Yusak, and Chengxi Liu. 'The influence of parents' travel patterns, perceptions and residential self-selectivity to their children travel mode shares'. *Transportation* 43, no. 2 (January 2015): 1–22. https://doi.org/10.1007/s11116-015-9579-0.

Van der Ploeg, Hidde. P., Dafna Merom, Grace Corpuz, and Adrian E. Bauman. 'Trends in Australian children traveling to school 1971–2003: Burning petrol or carbohydrates?' *Preventive medicine* 46, no. 1 (January 2008): 60–62. https://doi.org/10.1016/j.ypmed.2007.06.002.

Verplanken, Bas, and Sheina Orbell, 2003. 'Reflections on Past Behavior: A Self-Report Index of Habit Strength'. *Journal of applied social psychology* 33, no. 6 (May 2003): 1313–330. https://doi.org/10.1111/j.1559-1816.2003.tb01951.x.

Walker, Joan L., and Jieping Li. 'Latent lifestyle preferences and household location decisions'. *Journal of geographical systems* 9, no. 1 (September 2006): 77–101. https://doi.org/10.1007/s10109-006-0030-0.

Wen, Li Ming, Denise Fry, Chris Rissel, Helen Dirkis, Angela Balafas, and Dafna Merom. 'Factors associated with children being driven to school: Implications for walk to school programs'. *Health education research* 23, no. 2 (April 2008): 325–34. https://doi.org/10.1093/her/cym043.

Witten, Karen, Robin Kearns, Penelope Carroll, Lanuola Asiasiga, and Nicola Tava'e. 'New Zealand parents' understandings of the intergenerational decline in children's independent outdoor play and active travel'. *Children's geographies* 11, no. 2 (April 2013): 215–29. https://doi.org/10.1080/14733285.2013.779839.

Wong, Bonny Yee-Man, Guy Faulkner, and Ron Buliung. 'GIS measured environmental correlates of active school transport: A systematic review of 14 studies'. *International journal of behavioral nutrition and physical activity* 8, no. 39 (May 2011): 1–22. https://doi.org/10.1186/1479-5868-8-39.

Yarlagadda, Amith K., and Siva Srinivasan. 'Modeling children's school travel mode and parental escort decisions'. *Transportation* 35, no. 2 (February 2008): 201–18. https://doi.org/10.1007/s11116-007-9144-6.

Yoon, Seo Youn, Marjorie Doudnikoff, and Konstadinos G. Goulias. 'Spatial analysis of propensity to escort children to school in Southern California'. *Transportation research record* 2230, no. 1 (January 2011): 132–42. https://doi.org/10.3141/2230-15.

Zeid, Maya Abou. *Measuring and modeling activity and travel well-being*. PhD dissertation. Cambridge: Massachusetts Institute of Technology, 2009.

Zwerts, Enid, Georges Allaert, Davy Janssens, Geert Wets, and Frank Witlox. 'How children view their travel behaviour: A case study from Flanders, Belgium'. *Journal of transport geography* 18, no. 6 (November 2010): 702–10. https://doi.org/10.1016/j.jtrangeo.2009.10.002.

Chapter 11

THINKING ABOUT ABLEISM AND THIRD PLACE TO UNDERSTAND AND IMPROVE THE SCHOOL JOURNEYS OF DISABLED CHILDREN AND THEIR FAMILIES

Tim Ross[1,2,3] and Ron Buliung[4]

[1]Bloorview Research Institute, Holland Bloorview Kids Rehabilitation Hospital, Toronto, ON, Canada

[2]Department of Geography and Planning, University of Toronto, Toronto, ON, Canada

[3]Rehabilitation Sciences Institute, University of Toronto, Toronto, ON, Canada

[4]Department of Geography, Geomatics and Environment, University of Toronto, Mississauga, ON, Canada

Introduction

While scholars in Canada and around the world have given more attention to children's school journeys over the past 30 years, the school travel experiences of disabled children[1] and their families have remained mostly ignored. The inattention to disability within the school travel literature (see Ross and Buliung 2018) is disconcerting given that trips to and from school can produce remarkably difficult, inequitable and exclusionary experiences for some of the world's estimated 120–150 million disabled children under

1 We acknowledge the ongoing debate about using person-first (i.e. stating 'person with a disability') versus identity-first (i.e. stating 'disabled person') language to describe people living with disability. We primarily use identity-first language in this chapter to acknowledge disability's entwinement with identity (Ferrigon 2019) and to support consideration of the social aspects and complexity of disability (Ross 2013; Titchkosky 2001).

18 years of age (World Health Organization and World Bank 2011). Barriers impeding disabled children's school journeys often add to and exacerbate other challenges they face within their education systems.[2] Across Canada's education system, for example, more than one in four people with disabilities have reported disability-focused bullying and, likewise, more than one in four have reported being avoided or socially excluded (Canadian Human Rights Commission (CHRC) 2017). These and other challenges within Canada's education system have contributed to disabled people having lower levels of educational attainment. For example, in Canada, the range of people without disabilities reporting 'below high school' as their highest educational attainment is 15–33%, while the range for disabled people reporting this is 25–40% (CHRC 2017). This education gap has contributed to disabled people having fewer career options, experiencing under-employment, and having to deal with a disability wage gap (CHRC 2017).

Given what is known about disabled people's educational barriers and outcomes, and, as shown in this chapter, barriers that impede their school journeys, it is vexing that the school travel literature has largely ignored experiences of childhood disability. Disabled children are widely acknowledged as having a right to equal access to education. This is evidenced by international agreements (e.g. the 2007 United Nations (UN) Convention on the Rights of Persons with Disabilities; the 1989 UN Convention on the Rights of the Child), legislation (e.g. the United States' 2004 *Individuals with Disabilities Education Improvement Act*; Australia's 1992 *Disability Discrimination Act*; Canada's 1982 *Canadian Charter of Rights and Freedoms*) and the widespread shift towards inclusive education throughout much of West that has been unfolding since the 1960s (e.g. mainstreaming/integration; Graves and Tracy 1998). Knowing disabled children have a right to equal access to education but are not experiencing education access as such, and that this is affecting them negatively later in life, should we not be working determinedly to remove and prevent barriers from their school journeys? Should we not be working steadfastly to improve the equity, accessibility and inclusion they experience during school travel? Also, should we not question how the inequitable and exclusionary nature of some disabled children's school journeys persists and is viewed as normal or even acceptable by some?

This chapter discusses how disabled children and their families experience school travel across the Greater Toronto and Hamilton Area (GTHA) in Ontario, Canada, and how exclusionary aspects of their experiences are

2 For more on disabled children's challenges within education systems, see Buliung et al. (2021), Holt et al. (2019), Ross and Buliung (2019), Stephens et al. (2015) and Yantzi et al. (2010).

shaped and normalised by ableism. This is done by considering how families of disabled children experience parking their vehicles at school, how school bus travel times differ for children with and without disabilities, and how disability is often scoped out of active school travel (AST)[3] research and initiatives. This is followed by discussions about how ableism prevents disabled children and their families from enjoying school journeys as a 'third place' (Oldenburg 1999). This is also a call for attention to the limitations of ableism in school travel research to help with identifying and removing barriers. At the same time, consideration of the possibilities presented by thinking about school journeys as a third place is encouraged.

Coined by Oldenburg (1999, 16), 'third place' is a designation that can be applied to the various 'public places that host the regular, voluntary, informal, and happily anticipated gatherings of individuals beyond the realms of home and work'. Oldenburg (1999), along with Putnam (2000), contributed important assessments of social capital that drew attention to our need for places that facilitate serendipitous encounters, connect people to their community and foster a sense of belonging (Hindley 2020). Thinking about school journeys as a third place offers useful insights into how disabled children and their families are excluded from school journey places and, in turn, social interactions. Such thinking helps work towards advancing more inclusive school journeys that will allow disabled children and their families to enjoy them as a third place. Prior to discussing school journeys and third place, a short explanation of ableism is required.

Understanding Ableism

Ableism can be understood as a normalised set of beliefs, processes and practices that favour people with certain abilities and, correspondingly, perpetuate a disregard or even negative sentiment for those without preferred abilities (Goodley 2014; Wolbring 2008). The bias of ableism can be observed within 'ideas, actions, [institutional organisation], and social relations that presume able-bodiedness … and construct persons with disabilities as marginalised, oppressed, and largely invisible 'others'' (Chouinard 1997, 380). By supporting presumptions of able-bodiedness (e.g. within institutional arrangements, built environment and service designs, and people's attitudes), ableism privileges those whose bodies and abilities fit into an overly normative, 'species-typical' (Campbell 2009) concept of the human body. This concept

3 Active school travel can be understood as children's trips to and from school using travel modes that are (semi-) independent and self-propelled (McMillan et al. 2006).

is 'able-bodied', aligned with neoliberal aims and values, and ignores much of our diversity and citizenry (Goodley 2014). Ableism's continuous prioritisation and provision of opportunities for those with preferred abilities supports a deficit-based construction of disability and oppresses those whose bodies and abilities are non-normative (Campbell 2009; Wolbring 2008).

Ableism's influence on our everyday lives is undeniably far-reaching. This is true in terms of its depth (e.g. its influence on how we perceive ourselves and others, how we make decisions, how we act and talk) and breadth (e.g. its shaping of our environments, services, systems and attitudes). It is entrenched to such a degree that it typically goes unrecognised and, consequently, unquestioned. Among other things, ableism influences how people understand, experience and design their built environments (Imrie 2003; Livingston 2000; Stafford et al. 2020); how children experience educational spaces (Holt et al. 2019; Kilinc 2021) and play/leisure activities (Hodge and Runswick-Cole 2013), and how people value, perceive and treat both themselves and others (Campbell 2008, 2009). The student transportation field has not escaped ableism's influence (see Buliung et al. 2021; Ross et al. 2020a; Ross and Buliung 2018, 2019).

The following section discusses an array of findings from recent research on disabled children's school journeys in the GTHA. The central ethnographic component of this work involved conducting photovoice (Wang and Burris 1997) exercises and interviews with 15 children with complex, chronic conditions (i.e. osteogenesis imperfecta, Duchenne muscular dystrophy and spinal muscular atrophy) who typically require mobility support, as well as 15 of their parents. Child participants were provided with adaptive photo kits to enable independent photo-taking (see Ross 2020; Ross et al. 2020b). Children and parents were asked to separately photograph things or experiences they like or dislike, find easy or difficult, or anything about their school travel they wanted to share with researchers. To ensure rich, focused descriptions of school travel experiences and their material conditions, interview questions were broken down into groups to reflect a disaggregation of typical school travel routines and their micro-environments. In discussing findings from this research, evidence of presumed able-bodiedness within the designs of school sites and student transport services is presented. It is also shown how this presumption can make school journeys difficult for disabled children and their families and can prevent them from enjoying these journeys as a third place.

Disabled Children's School Journeys

In September 2016, the school year in Toronto, Canada, began with a bus driver shortage that caused transport issues for 49,000 students. Among these students were 10,000 with special transportation needs and, for 300 of these

students, the school bus transport issues lasted for weeks (Dubé 2017). Ontario Ombudsman Dubé (2017) reported that children with special transportation needs encountered issues including being picked up and dropped off at outrageously inconsistent times, spending extremely long periods of time on buses, not having required door-to-door adult supervision, and even being dropped off at the wrong bus stops and, in one case, the incorrect school. While it is encouraging that these issues received notable attention in the media and through Dubé's (2017) Ombudsman Report, it remains concerning that the inequitable and exclusionary aspects of typical everyday school travel (i.e. outside this abnormal bus driver shortage period) for disabled children generally receive little attention. The everyday school trips of these children and their families are the focus here, beginning with experiences of parking at school.

Parking at school

For some families, using a private vehicle to drop off and pick up children at school is a routine activity requiring little thought or effort. These families' parents will typically park their vehicle in a space to drop off their children, or they may queue up to let their children out at a school's designated kiss 'n' ride drop-off/pick-up area. Or, they may park adjacent to a school site (e.g. to avoid parking lot traffic) and have their children traverse the school site. In any of these scenarios, the act of parking at school is not particularly challenging for the parent or child. This, however, is not the case for some families of disabled children who must perform a remarkable amount of inequitable work to park on or nearby school sites that do not adequately account for their experiences and needs. These inequitable and, indeed exclusionary, experiences can be caused by parking arrangements that offer technically accessible parking that is functionally inaccessible (Ross and Buliung 2019). This functional inaccessibility can be caused by failures to account for traffic and parking operations around accessible parking spaces, as well as how families of disabled children actually use and experience accessible parking. Ableist expectations concerning how long drop-offs and pick-ups should take, and whose responsibility it is to create education access for disabled children, also contribute to the families' inequitable experiences.

By asking disabled children and their parents about their school trip experiences through inclusively designed photovoice activities and interviews,[4]

4 For more on the study's inclusive qualitative research design, see Ross (2020) and Ross et al. (2020a).

Ross and Buliung (2019) found that many of the children's school sites offer technically accessible parking spaces. That is, the sites might provide accessible parking spaces that satisfy regulations concerning accessible parking space ratios and dimensions, access aisles, signage requirements and proximity to sidewalk curb cuts and building entrances. Unfortunately, families of disabled children often cannot access these accessible spaces when they are most needed: during drop-off and pick-up periods. For multiple families, buses parked on their children's school sites during drop-off and pick-up periods blocked them from using the accessible parking space(s). Other families were kept from using accessible parking spaces due to parking lot traffic caused by parents queued up in vehicles to drop off or pick up their able-bodied children at demarcated kiss 'n' ride locations. Also, parking lot configurations requiring turning radii too tight for some of the families' larger vehicles made using school sites' accessible parking spaces difficult or impossible (Ross and Buliung 2019). Yet another issue was that there are simply not enough accessible parking spaces at children's schools because they are usually occupied when needed. This can lead to parents choosing to park off-site and finish school journeys as pedestrians (Ross and Buliung 2019). This suggests that planners and designers should carefully consider exceeding minimum accessible parking ratios on school sites to account for their unique need for accessible parking during schools' twice daily influxes of traffic during drop-off and pick-up periods. This is especially true for schools offering specialised services and programmes for disabled children. The limited supply of accessible parking spaces can also be exacerbated by families without accessible permits using these spaces, and by disabled parents using these spaces to pick up or drop off children even though the parents themselves are not exiting the vehicle (Ross and Buliung 2019).

Some parents of disabled children are also hesitant to use schools' kiss 'n' ride drop-off/pick-up areas (Ross and Buliung 2019). In fact, some avoid using these areas entirely. This hesitation or avoidance is unfortunate given that these families have a right to accessible parking and should feel welcome to use these areas that are often conveniently located near school building entrances. Ross and Buliung (2019) found that some parents feel this way out of a desire to avoid angering other parents waiting in vehicles behind them who may be in a hurry to drop off children and go to work. In other words, parents of disabled children are aware that they cannot use kiss 'n' ride areas as quickly as parents with able-bodied children who can stop in a kiss 'n' ride area, have their child quickly hop out of or into the vehicle, and then go on their way. Some parents of disabled children require more time to help their children transition into and out of the vehicle. Further, they may not be able to hurry such transitions because doing so could create safety risks to the child and to

themselves (e.g. as they lean awkwardly into their vehicle to perform lifts, to lower ramps, and as they navigate their access the school site). The hesitation of disabled children's parents to use kiss 'n' ride areas and their feelings of embarrassment when they do use them are rooted in what Ross and Buliung (2019, 295) describe as,

> an unquestioned, shared social expectation of what is an appropriate duration for a kiss 'n' ride drop-off/pick-up that is based on a hyper-normative, ableist understanding of children's bodies, physiologies, and capabilities. Families living with childhood disability who are unable to meet this temporal kiss 'n' ride parking expectation may be deterred from using this parking even if it is a good (or even the best) option in terms of parking close to school.

To deal with ableist expectations regarding the time needed to use kiss 'n' ride areas, and to get around not being able to use accessible parking spaces during drop-off and pick-up periods, families of disabled children perform certain tactics. Sometimes, these tactics involve taking on inequitable work to gain education access for their children.

One way that parents of disabled children may choose to deal with the various parking issues mentioned above is to park off-site. Some families do this even though they have a right to use accessible parking nearby the school and should not even have to consider the inequitable physical work that parking off-site demands. The pedestrian trips between a vehicle parked off-site and a school require extra time, create safety risks (e.g. lifting children out of vehicles over snowbanks, traveling along sidewalks with snow and ice) and they can cause some disabled children to tire immediately before starting their school day (Ross and Buliung 2019). For example, due to an inadequate number of accessible parking spaces on site, this chapter's second author has, on multiple occasions, been forced to carry his child several hundred metres across snow and ice-covered sidewalks to the school entrance.

Some families of disabled children also perform temporal work to gain access to education. They do this by altering their schedules so that they can use the accessible parking options they need. For example, Ross and Buliung (2019) reported an arrangement between a school and parent that permitted a disabled child's late drop-off every day. Arriving late to school each day served as the 'solution' to allow the parent to use the accessible parking space blocked daily by buses that park on-site during the morning drop-off period. The parent was 'allowed' to wait for the buses to leave so that they could do a late drop-off using the accessible parking space. This arrangement allowed the school not to change its inaccessible site design and bus operations while making the physical demands of drop-offs

easier for the parent. Although the arrangement eased physical demands on the parent, it did impose scheduling work on them. By agreeing to this late drop-off arrangement, the parent gave up the flexibility that other parents have to drop-off their children early. The parent must instead arrive as soon as possible after buses depart to avoid the child missing too much classroom time. The more serious issue with this arrangement is that it discounts the child's needs and education access rights. That is, it causes the child to lose classroom time and miss out on opportunities for peer interaction before class every day. An arrangement between another parent and a different school allowed for their disabled children to leave class 15 minutes early each day to allow for easier school departures. This accepted lost classroom time adds up to 75 minutes per week and 47.5 hours per 190-day school year (Ross and Buliung 2019, 293). These late drop-off and early pick-up arrangements suggest that rather than directly addressing inaccessible school site designs and student transport operations, schools are sometimes willing to propose ad hoc 'solutions' that reduce disabled students' classroom and peer interaction time. Moreover, these scheduling arrangements suggest that schools are at times prioritising their own institutional exigencies over the needs and rights of disabled children and their families (Ross and Buliung 2019). This simply does not align with the responsibility of schools and school boards to provide disabled children with equal education access. Suppose school parking lots are thoughtfully designed in a way that meets accessibility standards and meaningfully accounts for the input and experiences of families living with childhood disability. In that case, the need for these ad hoc arrangements and their negative impacts on disabled children's education access and social interaction opportunities could be prevented.

The parking experiences discussed above show how families of disabled children must at times perform inequitable work that is physical (e.g. parking off site and traveling as pedestrians), temporal (e.g. waiting, scheduling) and generally invisible as part of their school journeys, and that this work negatively affects their equal access to education. Ross and Buliung (2019) also show how families must at times undertake education access work that is social in nature, as they must deal with other parents' ableist expectations concerning how long it should take to use kiss 'n' ride areas, as well as school administrators who view it as normal and acceptable for families to take on responsibilities and perform work that provides their children with education access. It remains deeply disturbing that some parents of disabled children are parking off-site when they now have a right to accessible parking, while parents of able-bodied children queue up to use kiss 'n' ride areas nearby the school building. This is plainly inequitable and unjust. How can it be that those who have a need for and a right to accessible parking are, in some cases, routinely doing

significantly more work to achieve school drop-offs and pick-ups than those without these needs and rights? How can it be normal and acceptable for a school to ask some parents of disabled children perform late drop-offs and early pick-ups every day at the cost of their children's classroom and peer interaction time? How can school administrators ask families to do this work to compensate for their inaccessible parking designs and traffic operations? Would they ever make such a request to families of so-called able-bodied children? If schools, school boards, school site planners and designers, and developers do not begin regularly engaging questions about how it is normal to exclude disability experiences from school site parking designs and operations, it is likely that parking at school will remain a barrier to education access that takes important opportunities away from disabled children.

Busing to school

Beyond facilitating access to school for some children, bus trips can provide opportunities for children to engage in unsupervised peer interaction. However, even though disabled children are more likely to require busing than those not living with disability (Falkmer et al. 2004; Wheeler et al. 2009), school bus trips can be a daily challenge for them and their families. School bus trips can be difficult for those children who travel in buses while seated in wheelchairs[5] and for those using child safety restraint systems (e.g. car seats, safety vests/harnesses, five-point harnesses integrated into bus seats) (O'Neil and Hoffman 2018). Some of the issues disabled children face during school bus trips include undergoing substantially longer bus trips than children without disabilities, as well as feeling lonely or even unsafe (Buliung et al. 2021). Parents of disabled children also experience difficulties, particularly concerning worrying about bus drivers having adequate disability training to ensure their children's safety. Such issues may reduce disabled children's (and their parents') sense of belonging within their own education settings and communities and suggest that student transportation has, to some degree, been excluded from the scope of inclusive education (Ross et al. 2020a).

Using the 2016–2017 school year busing records for elementary and secondary students within the Toronto District School Board (i.e. Canada's largest and most populated public school board), Buliung et al. (2021) analysed differences in excess travel between children with disabilities (i.e. those labelled as deaf, physically disabled or having a behaviour exceptionality)

5 An estimated 300,000 students in the United States travel to school in a bus while seated in a wheelchair (Buning and Karg 2011).

and those without disabilities. Excess travel can be understood as the distance and/or time of an actual journey that is considered in excess when compared to an optimised, shortest possible trip to a similar destination (Hamilton 1982; Ma and Bannister 2006). They found that disabled children were roughly doubling the amount of excess travel that children without disabilities were undergoing. More specifically, disabled children lost 8.3 minutes more per trip to excess travel than able-bodied children (Buliung et al. 2021). This suggests that disabled children undergoing two bus trips per day (i.e. to and from school) may be losing on average almost 17 minutes more per day to excess bus travel than children without disabilities. This indicates that disabled students are undergoing substantially longer bus trips and carrying a heavier school travel burden than able-bodied students.

A cause of disabled children's heavy travel burden is their frequent placement in schools outside their neighbourhoods. Such placements occur so that disabled students can attend a subset of schools that offer specialised programming and services and/or are accessibly designed (Buliung et al. 2021; Dubé 2017; Ross et al. 2020a). This means that while children without disabilities can typically attend school locally, disabled children are frequently asked to go to schools outside their neighbourhoods, which usually demands more travel, both in terms of time and distance. Having education and student transport systems that rely on disabled children carrying inequitable school bus travel burdens is undeniably problematic. Upon considering some of the concerns and experiences associated with disabled children enduring long school bus trips, the seriousness of these longer trips becomes clearer.

Requiring a disabled child to attend a far-away school can separate the child from their siblings and neighbourhood peers. This separation, which applies to both disabled students' in-bus and in-school experiences, may prevent opportunities for them to build and strengthen sibling relationships and in-neighbourhood friendships. Travelling to non-local schools also frequently requires disabled children to travel on school buses without any (or with only a few) other children. Offering accessible student transport services separate from typical student transport services does not align with decades of mainstreaming/integration practices that have been occurring within classrooms. The separation reduces some disabled children's opportunities for informal peer interactions during bus trips and leaves some feeling lonely – a sentiment that can be exacerbated by longer bus trips (Ross 2020). This is an unfortunate set-up given that able-bodied children travelling via school bus typically have ample opportunity to interact with peers during bus trips.

Longer bus trips for disabled children can also require families of disabled children to wake up earlier on school days. On the surface, earlier wake-ups

may not appear to be a particularly serious issue to some readers. However, some families of disabled children are already waking up very early each day to perform an already-demanding morning routine that requires significant parental support and time (e.g. helping children to get dressed and fed, managing medication, performing muscle mobilisation/stretching routines and lift-and-carry transitions, and carrying out time-consuming tube feeding) (Ross 2020). Longer bus trips resulting from disabled students being placed in far-away schools can add to and exacerbate the morning challenges by taking away preparation time and causing even earlier wake-ups. It must also be noted that requiring disabled children to travel farther to school creates demand for specialised student transport services and, consequently, can add to student transport costs while also adding administrative and logistical work for families (Ross et al. 2020a).

Some families of disabled children are understandably concerned about their children's safety and well-being during school bus transport. Disabled children themselves have expressed feeling lonely during bus trips and nervous during certain student transport scenarios (e.g. when hitting speed bumps while riding in the bus, using bus lifts and steps, and not being able to unstrap their wheelchairs and use emergency doors) (Ross 2020). Parents have heightened concerns and questions about bus drivers' roles and training. This may be due to policies of school boards and/or student transport service providers that prevent drivers from physically helping their children for liability reasons, as well as not knowing if bus drivers have adequate disability training or the necessary tools and knowledge to communicate with non-verbal children (Falkmer et al. 2004; Falkmer and Gregersen 2002; Ross et al. 2020a). In Toronto, Canada, some bus drivers are instructed to only adjust the position of children's equipment and not their bodies (Buliung et al. 2021). Questioning bus drivers' roles and responsibilities, and ensuring they are adequately trained to support disabled children, is a major concern since medical or transport emergencies may arise during bus trips. With bus drivers often being the only person with whom a disabled child can interact with during bus trips (Ross 2020), some disabled children (e.g. those with neuromuscular conditions) may require them to adjust their physical posture, especially during long bus trips (O'Neil and Hoffman 2018). Unfortunately, disability training for bus drivers remains largely unsatisfactory, as cash-strapped governments and boards have not shown the political will to provide enhanced training, nor have they allocated the necessary resources. Due to their high turnover rate, there may be hesitation to advance bus driver disability training. Although bus drivers perform a clearly demanding job, they maintain a high turnover rate because their work is typically low-paying, part-time and involves split shifts (Buliung et al. 2021).

Active school travel

Over the past few decades, there have been widespread declines in children's physical activity levels (Buliung et al. 2011; Faulkner et al. 2010) and AST (Active Healthy Kids 2014; Buliung et al. 2009; Larsen et al. 2012). These declines, combined with an increase in childhood overweight/obesity rates (Tremblay et al. 2010), interest from governments in developing policy, and in some cases, data-driven intervention(s) to address these issues, have led to an increase in scholarly attention to understanding and advancing the use of AST modes (see Buliung et al. 2009, 2011; Fusco et al. 2012, 2013). This is because AST is viewed as a key opportunity to advance physical activity levels and children's independent mobility (CIM), and to gain related population health benefits. Unfortunately, disability experiences have been largely excluded from AST research (Ross and Buliung, 2018).

In Ross and Buliung's (2018) systematic review of disability's treatment in the AST and CIM literatures, they demonstrate that disability has received remarkably less scholarly attention than other elements of social identity (i.e. gender, age, race/ethnicity and class). Disability has been largely scoped out of AST research and school travel planning initiatives, almost as if the entrenched bias of ableism (i.e. thinking that active bodies move like this, active bodies play like that) has led scholars and practitioners to not even consider the possibility that disabled children might wish to partake in AST (i.e. that they might like to travel to school using AST modes, perhaps with siblings, friends or parents). Ross and Buliung (2018) also found that of the AST and CIM articles that do consider childhood disability, the vast majority are focused on North American and Nordic nations and do not meaningfully acknowledge children's agency by seeking their critical input on what they would change about their school trips and how. Therefore, little is known about how disabled children conceptualise or experience AST. What is known, however, is that their embodied experiences have been mostly ignored in AST research, as well as AST plans and initiatives. This is due to an ongoing ableist bias in AST and CIM research (and school travel research more broadly) that must be addressed. Questioning ableism's remarkable entrenchment and influence, which have allowed for the exclusion of disability in AST research to be normalised and go unquestioned, is necessary if AST is to become a viable school travel option for disabled children and their families. By making AST a viable option and making both bus trips and parking at school easier and more pleasant, it is possible to work toward presenting disabled children and their families with exciting opportunities to enjoy their school journeys as a third place.

School Journeys as a Third Place

Oldenburg's[6] (1999) third place concept has been used to analyse and describe countless public spaces that serve as informal gathering places outside people's homes and workplaces. In recent years, the concept has been used to consider the value and importance of social interactions associated with, among other things, community gardens (Dolley 2020), leisure/exercise event sites (Hindley 2020), community transport (Hagan 2020), neighbourhoods (Witten and Carroll 2016) and urban environments (Elshater 2018).[7] Thinking about school journeys as a third place is necessary and could help to advance more inclusive and enjoyable school travel experiences for disabled children and their families.

A child's school journey will typically involve moving within and through various places (e.g. the environments surrounding one's walk to school, the environments inside and outside a family's private vehicle or a child's school bus, and different areas of a schoolyard). Moving within and through these places presents opportunities for third place experiences – that is, experiences of places where people informally, voluntarily and habitually interact in ways that foster a sense of belonging and support community building (Hindley 2020; Oldenburg 1999). A walk to school serves as a third place when children, either routinely or serendipitously, meet up and opt to walk, play and chat together along the way. Similarly, a schoolyard serves as a third place when parents greet one another as they drop off their children and have a friendly conversation. Lastly, a school bus serves as a third place when a boarding child opts to sit and chat with a friend or perhaps another child they do not know very well. These hypothetical interactions, all of which are voluntary, informal and rooted in habitual activities for both children and parents, occur on neutral grounds that are levelled and inclusive for those who are present (Oldenburg 1999). Unfortunately, in reality, the places that make up school journeys often are not levelled and inclusive for all who are present, as they include barriers that can be exclusionary for disabled children and their families. School journey places therefore are often not inclusive to all and thus, arguably, not serving as true third places. Having said this, school journeys could be inclusive and serve as third places to all. In fact, they truly should.

This chapter has illustrated that disabled children and their families encounter barriers during school journeys that cause inequitable and exclusionary

6 See also Oldenburg and Brissett (1982).

7 For more examples of third places, see Oldenburg (2001).

experiences. They must perform inequitable physical, temporal and social work (much of which is invisible) when parking at school, and they must deal with longer and lonelier bus trips to schools outside their neighbourhoods. Beyond this, disabled children have been largely excluded from the majority of AST research and initiatives (Ross and Buliung 2018). Combined, these issues indicate that the places making up school journeys are often not levellers. As Oldenburg (1999, 24) notes, '[a] place that is a leveler is, by its nature, an inclusive place. It is accessible to the general public and does not set formal criteria of membership and exclusion'. While school journey places may serve as levellers for most people (i.e. those who are able-bodied), they are not adequately serving as levellers for all (i.e. those living with disability). Further, while there are of course no set formal criteria of membership and exclusion for school journey places, these places' inherent barriers can serve as quiet, informal reminders about who does and does not belong. These informal reminders about one's disability status make it difficult for those living with disability to enter into a third place. Indeed, to enter a third place, one must figuratively check their status at the door to ensure that all those who are present are equal and can be accepted just as themselves (Oldenburg 1999, 25). When the material conditions of school journey places and their inherent services and systems constantly remind families of disabled children about a child's disability status while simultaneously signalling that they do not belong, it is of course difficult, impossible even, for them to check their status, to feel equal and to engage in third place interactions and reap their benefits.

Examples of how school journey places prevent disabled children and their parents from experiencing third place interactions are plentiful. First, suppose a parent cannot gain access to an accessible parking space that they need to safely transition their disabled child into and out of a vehicle. In that case, it is reasonable to suspect they will not feel welcome or fairly treated and will be less likely to engage in third place experiences. Feeling welcome is a requisite for third place experiences. Second, the arrangements between families of disabled children and schools that allow for late drop-offs and early pick-ups (i.e. to deal with inaccessible school site parking designs) create a temporal segregation between these families' school journeys and those of other families. By arriving late and leaving early, disabled children and their parents miss out on opportunities to have third place interactions with those on site during typical drop-off and pick-up periods. Similarly, the children and families doing drop-offs and pick-ups during typical times miss out on opportunities to interact with disabled children and their families and to learn about disability. Having such opportunities could add to community cohesion and inclusion. Third, the segregation of accessible school bus services from typical school bus services effectively prevents some disabled children from enjoying bus trips

as a third place because they often have no or few students with whom they can interact. This sort of mobile segregation remains almost entirely and quite shockingly unquestioned. Last, AST places (e.g. neighbourhood sidewalks, street crossings, school zones) that are not carefully planned and designed to account for the presence of childhood disability can discourage some families of disabled children from even considering AST as a viable option, thus preventing them from experiencing AST as a third place.

The examples discussed above are enabled by and through ableism's presence within our values, attitudes and the designs of our school journey places and their inherent services and systems. Ableism allows for school journey places to be shaped in ways that prioritise people with normative 'species-typical' (Campbell 2009) bodies while excluding those whose bodies do not fit into the mould of this ableist human body concept. In turn, this prevents opportunities for disabled children and their families to socially interact with others during school journeys and thus keeps them from experiencing school journeys as a third place and from obtaining the benefits of third place interactions.

Moving Forward: Improving Disabled Children's School Journeys

This chapter has considered numerous issues that disabled children and their families encounter in relation to their school journeys. They encounter issues while parking at school, undergoing school bus trips and they have been largely excluded from AST research and initiatives. Ableism contributes to the normalcy, obscuration and persistence of these inequitable and exclusionary school journey experiences. Furthermore, ableism prevents these families from experiencing school journeys as a third place and gaining the associated benefits of third place interactions. This must stop to truly satisfy disabled children's right to equal access to education.

Engaging school journeys with attention to the limitations of ableism and the possibilities of school journeys as third places is a practical way to advance more inclusive school journeys. Based on the school journey experiences described above, it is imperative that we work diligently to identify and address the different ways in which ableism shapes school journey places and how they are experienced. Questioning ableist values, concepts, practices and designs (e.g. of streetscapes, vehicles, school sites, services and programmes) is necessary if we are to identify and unsettle the ways in which disabled children's exclusion from everyday school travel have been normalised. School travel scholars and practitioners should acknowledge the frequently unrecognised and unquestioned bias of ableism, and focus school travel planning efforts on

mitigating and preventing ableism's effects on the school journeys of disabled children. In other words, reflect on disability and ableism, work with disabled children and their families, and include those with insider status in your projects that are research-based and/or focused on social and/or environmental interventions. We view this not just as important, but as imperative. Without a clear understanding of the ways in which ableism shapes school journeys (e.g. via scholar and practitioner reflections on their own values, and through direct engagement in research and policy), it is highly unlikely that we can disrupt ableism due to its profound entrenchment in society.

Incorporating Oldenburg's (1999) thought about third places into research, policy and initiatives concerning disabled (and all) children's school journeys is also practical. While our recommended focus on ableism can help identify limitations in how disabled children's school journeys are organised and experienced, thinking about third place helps us consider the possibilities of their school journeys. That is, by understanding and celebrating school journeys as third places that support social interaction and foster a sense of community, a wider and better appreciation of their importance can be reached. Moreover, we might come to appreciate better the importance and necessity of including disabled children in school journeys so that they can enjoy and benefit from third place interactions on their way to and from school each day (i.e. like other children can). It might even be possible to better understand and appreciate the ways in which inclusion improves life for everyone. Viewing school journeys as third places creates an opportunity to consider what could be possible. It carves out intellectual space to think about and even reimagine more inclusive school journey places and experiences. For example, school site designs that offer accessible parking spaces that are both technically *and* functionally accessible could be imagined, as well as kiss 'n' ride area layouts that are inviting to families of disabled children. Such changes may very well improve parking lot traffic circulation for everyone. Thinking about school journeys as third places might also encourage us to extend our inclusive education principles and practices (e.g. mainstreaming/integration) beyond the classroom to student transportation by stopping the segregation of accessible and typical school bus services. This could result in truly meaningful interactions during bus trips, both for children with and without disabilities. Third place thinking might even help us reimagine more inclusive AST plans and initiatives that consider the possibility that disabled children would like to travel to school with parents, siblings and friends, or by themselves, via AST modes. By considering the possibilities that thinking about school journeys as a third place presents, and the limitations that ableism perpetuates, we can simultaneously work towards eliminating barriers from school journeys and reimagining more inclusive school travel options for disabled children and their families.

References

Active Healthy Kids Canada. *Is Canada in the Running? – Report Card on Physical Activity for Children and Youth*. Toronto: Active Healthy Kids Canada. 2014.

Buliung, Ron, Patrick Bilas, Timothy Ross, Cosmin Marmureanu and Ahmed El-Geneidy. 'More Than Just a Bus Trip: School Busing, Disability and Access to Education in Toronto, Canada'. *Transportation Research Part A: Policy and Practice* 148 (June 2021): 496–505. https://doi.org/10.1016/j.tra.2021.04.005.

Buliung, Ron, Guy Faulkner, Theresa Beesley and Jacky Kennedy. 'School Travel Planning: Mobilizing School and Community Resources to Encourage Active School Transportation'. *Journal of School Health* 81, no. 11 (November 2011): 704–12. https://doi.org/10.1111/j.1746-1561.2011.00647.x.

Buliung, Ron, Raktim Mitra and Guy Faulkner. 'Active School Transportation in the Greater Toronto Area, Canada: An Exploration of Trends in Space and Time (1986–2001)'. *Preventive Medicine* 48, no. 6 (June 2009): 507–12. https://doi.org/10.1016/j.ypmed.2009.03.001.

Buning, Mary Ellen and Patricia E. Karg. 'School Bus Transportation for Students Seated in Wheelchairs'. *Journal of Pediatric Rehabilitation Medicine* 4, no. 4 (January 2011): 259–68. https://doi.org/10.3233/PRM-2011-0183.

Campbell, Fiona Kumari. *Contours of Ableism: The Production of Disability and Abledness*. New York: Springer. 2009.

Campbell, Fiona Kumari. 'Exploring Internalized Ableism Using Critical Race Theory'. *Disability & Society* 23, no. 2 (March 2008): 151–62. https://doi.org/10.1080/09687590701841190.

Canadian Human Rights Commission. *Left Out: Challenges Faced by Persons with Disabilities in Canada's Schools*. Canadian Human Rights Commission, 2017. Available at: https://www.chrc-ccdp.gc.ca/en.

Chouinard, Vera. 'Making Space for Disabling Differences: Challenging Ableist Geographies'. *Environment and Planning D: Society and Space* 15 (August 1997): 379–90. https://doi.org/10.1068/d150379.

Dolley, Joanne. 'Community Gardens as Third Places'. *Geographical Research* 58, no. 2 (March 2020): 141–53. https://doi.org/10.1111/1745-5871.12395.

Dubé, Paul. *The Route of the Problem: Ombudsman Report*. Ombudsman of Ontario, 2017. Available at: https://www.ombudsman.on.ca/Files/sitemedia/Documents/Resources/Reports/SORT/BusingFinal-wCovers-EN.pdf.

Elshater, Abeer. 'What Can the Urban Designer Do for Children? Normative Principles of Child-Friendly Communities for Responsive Third Places'. *Journal of Urban Design* 23, no. 3 (August 2018): 432–55. https://doi.org/10.1080/13574809.2017.1343086.

Falkmer, Torbjörn, Anna Anund, Gunilla Sörensen and Marita Falkmer. 'The Transport Mobility Situation for Children with Autism Spectrum Disorders'. *Scandinavian Journal of Occupational Therapy* 11 (July 2004): 90–100. https://doi.org/10.1080/11038120410020575.

Falkmer, Torbjörn and Nils Petter Gregersen. 'Perceived Risk among Parents Concerning the Travel Situation for Children with Disabilities'. *Accident Analysis & Prevention* 34, no. 4 (July 2002): 553–62. https://doi.org/10.1016/s0001-4575(01)00053-7.

Faulkner, Guy, Vanessa Richichi, Ron Buliung, Caroline Fusco and Fiona Moola. 'What's 'Quickest and Easiest?' Parental Decision Making about School Trip Mode'. *International Journal of Behavioral Nutrition and Physical Activity* 7, no. 72 (August 2010): 1–11. https://doi.org/10.1186/1479-5868-7-62.

Ferrigon, Phillip. 2019. 'Person-First Language vs. Identity-First Language: An Examination of the Gains and Drawbacks of Disability Language in Society'. *Journal of Teaching*

Disability Studies (2019). Available at: https://jtds.commons.gc.cuny.edu/person-first-language-vs-identity-first-language-an-examination-of-the-gains-and-drawbacks-of-disability-language-in-society/.

Fusco, Caroline, Guy Faulkner, Fiona Moola, Ron Buliung and Vanessa Richichi. 'Urban School Travel: Exploring Children's Qualitative Narratives about Their Trip to School'. *Children, Youth and Environments* 23, no. 3 (2013): 1–23. https://doi.org/10.7721/CHILYOUTENVI.23.3.0001.

Fusco, Caroline, Fiona Moola, Guy Faulkner, Ron Buliung and Vanessa Richichi. 'Toward an Understanding of Children's Perceptions of Their Transport Geographies: (Non) Active School Travel and Visual Representations of the Built Environment'. *Journal of Transport Geography* 20, no. 1 (January 2012): 62–70. https://doi.org/10.1016/j.jtrangeo.2011.07.001.

Goodley, Dan. *Dis/Ability Studies: Theorising Disablism and Ableism*. London, UK: Routledge. 2014.

Graves, P and J Tracy. 'Personal Viewpoint Education for Children with Disabilities: The Rationale for Inclusion'. *Journal of Paediatric Child Health* 34, no. 3 (June 1998): 220–25. https://doi.org/10.1046/j.1440-1754.1998.00210.x.

Hagan, Robert. 'Getting Out of the House: The Use of Community Transport as a Third Place for Rural-Dwelling Older Adults'. *Ageing & Society* 40, no. 11 (November 2020): 2519–39.

Hamilton, Bruce W. 'Wasteful Commuting'. *Journal of Political Economy* 90, no. 5 (October 1982): 1035–51.

Hodge, Nick and Katherine Runswick-Cole. '"They Never Pass Me the Ball": Exposing Ableism through the Leisure Experiences of Disabled Children, Young People and Their Families'. *Children's Geographies* 11, no. 3 (October 2013): 311–25. https://doi.org/10.1080/14733285.2013.812275.

Holt, Louise, Sophie Bowlby and Jennifer Lea. 'Disability, Special Educational Needs, Class, Capitals, and Segregation in Schools: A Population Geography Perspective'. *Population, Space and Place* 25, no. 4 (January 2019): e2229.

Hindley, David. '"More Than Just a Run in the Park": An Exploration of Parkrun as a Shared Leisure Space'. *Leisure Sciences* 42, no. 1 (January 2020): 85–105. https://doi.org/10.1080/01490400.2017.1410741.

Imrie, Rob. 'Architects' Conceptions of the Human Body'. *Environment and Planning D: Society and Space* 21, no. 1 (February 2003): 47–65. https://doi.org/10.1068/d271t.

Kilinc, Sultan. 'Mothers of Children with Disabilities' Conceptions of Inclusive Education: Unveiling an Exclusionary Education System Privileging Normality and Ableism'. *Disability & Society* (February 2021): 1–25. https://doi.org/10.1080/09687599.2021.1888281.

Larsen, Kristian, Jason Gilliland and Paul Hess. 'Route-Based Analysis to Capture the Environmental Influences on a Child's Mode of Travel between Home and School'. *Annals of the Association of American Geographers* 102, no. 6 (December 2012): 1348–65. https://doi.org/10.1080/00045608.2011.627059.

Livingston, Kathy. 'When Architecture Disables: Teaching Undergraduates to Perceive Ableism in the Built Environment'. *Teaching Sociology* 28, no. 3 (July 2000): 182–91.

Ma, Kang-Rae and David Banister. 'Excess Commuting: A Critical Review'. *Transport Reviews* 26, no. 6 (November 2006): 749–67. https://doi.org/10.1080/01441640600782609.

McMillan, Tracy, Kristen Day, Marlon Boarnet, Mariela Alfonzo and Craig Anderson. 'Johnny Walks to School – Does Jane? Sex Differences in Children's Active Travel to School'. *Children, Youth and Environments* 16, no. 1 (2006): 75–89.

Oldenburg, Ray. *Celebrating the Third Place: Inspiring Stories about the Great Good Places at the Heart of Our Communities*. New York: Marlowe & Company. 2001.

Oldenburg, Ray. *The Great Good Place: Cafes, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. New York: Marlowe & Company. 1999.

Oldenburg, Ramon and Dennis Brissett. 'The Third Place'. *Qualitative Sociology* 5, no. 4 (December 1982): 265–84.

O'Neil, Joseph and Benjamin D. Hoffman. 'School Bus Transportation of Children with Special Health Care Needs'. *Pediatrics* 141, no. 50 (May 2018): e20180513. https://doi.org/10.1542/peds.2018-0513.

Putnam, Robert. *Bowling Alone: The Collapse and Revival of American Community*. New York: Simon and Schuster. 2000.

Ross, T. 'Advancing Ontario's Accessibility: A Study of Linguistic, Discursive, and Conceptual Barriers'. *Canadian Journal of Urban Research* 22, no. 1 (June 2013): 126–44.

Ross, Timothy. 'Inclusive Research Design: Accounting for Childhood Disability in School Transportation Research', in *Transport and Children's Well-Being*, edited by Owen Waygood, Margareta Friman, Lars Olsson, Raktim Mitra, 273–93. Elsevier, Amsterdam. 2020.

Ross, Timothy and Ronald Buliung. 'Access Work: Experiences of Parking at School for Families Living with Childhood Disability'. *Transportation Research Part A: Policy and Practice* 130 (December 2019): 289–99.

Ross, Timothy and Ronald Buliung. 'A Systematic Review of Disability's Treatment in the Active School Travel and Children' Independent Mobility Literatures'. *Transport Reviews* 38, no. 1 (2018): 349–71. https://doi.org/10.1080/01441647.2017.1340358.

Ross, Timothy, Patrick Bilas, Ronald Buliung and Ahmed El-Geneidy. 'A Scoping Review of Accessible Student Transport Services for Children with Disabilities'. *Transport Policy* 95 (September 2020a): 57–67.

Ross, Timothy, Ronald Buliung, Anne Murphy and Andrew Howard. 'A Visual Ethnographic Pilot Study of School Travel for Families Living with Childhood Disability'. *Children's Geographies* 18, no. 3 (2020b): 283–97. https://doi.org/10.1080/14733285.2019.1635991.

Stafford, Lisa, Barbara Adkins and Jill Franz. 'Bounded at the Driveway's Edge: Body-Space Tensions Encountered by Children with Mobility Impairments in Moving about the Neighbourhood Street'. *Children's Geographies* 18, no. 3 (2020): 298–311. https://doi.org/10.1080/14733285.2019.1635992.

Stephens, Lindsay, Helen Scott, Henna Aslam, Nicole Yantzi, Nancy L Young, Sue Ruddick and Patricia McKeever. 'The Accessibility of Elementary Schools in Ontario, Canada: Not Making the Grade'. *Children, Youth and Environments* 25, no. 2 (2015): 153–75. https://doi.org/10.7721/chilyoutenvi.25.2.0153.

Titchkosky, T. 'Disability: A Rose by Any Other Name? 'People-First' Language in Canadian Society'. *The Canadian Review of Sociology and Anthropology* 38, no. 2 (May 2001): 125–40. https://doi.org/10.1111/j.1755-618X.2001.tb00967.x.

Tremblay, Mario, Margot Shields, Manon Laviolette, Cora L. Craig, Ian Janssen and Sarah Connor Gorber. 'Fitness of Canadian Children and Youth: Results from the 2007–2009 Canadian Health Measures Survey'. *Health Reports* 21 (March 2010): 1–7.

United Nations. *Convention on the Rights of the Child*. UNICEF, 1989. Available at: https://www.unicef-irc.org/portfolios/crc.html#Part-I.

United Nations. *Convention on the Rights of Persons with Disabilities*. United Nations General Assembly, 2007. https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities/convention-on-the-rights-of-persons-with-disabilities-2.html.

United States. *Individuals with Disabilities Education Improvement Act*, 2004. Bethesda, MD.

Wang, Caroline and Mary Ann Burris. 'Photovoice: Concept, Methodology, and Use for Participatory Needs Assessment'. *Health Education & Behaviour* 24, no. 3 (June 1997): 369–87. https://doi.org/10.1177/109019819702400309.

Wheeler, Krista, Yan Yang and Huiyun Xiang. 'Transportation Use Patterns of U.S. Children and Teenagers with Disabilities'. *Disability and Health Journal* 2, no. 3 (July 2009): 158–64. https://doi.org/10.1016/j.dhjo.2009.03.003.

Witten, Karen and Penelope Carroll. 'Children's Neighborhoods: Places of Play or Spaces of Fear?', in *Space, Place, and Environment*, edited by K. Nairn et al. Springer Reference. 2016, Geographies of Children and Young People 3: 331–50. https://doi.org/10.1007/978-981-287-044-5_25.

Wolbring, Gregor. 'The Politics of Ableism'. *Development* 51 (June 2008): 252–58. https://doi.org/10.1057/dev.2008.17.

World Health Organization and World Bank. *World Report on Disability*. World Health Organization, 2011. Available at: https://apps.who.int/iris/handle/10665/44575.

Yantzi, Nicole, Nancy L. Young and Patricia McKeever. 'The Suitability of School Playgrounds for Physically Disabled Children'. *Children's Geographies* 8, no. 1 (February 2010): 65–78. https://doi.org/10.1080/14733281003650984.

INDEX