

WestminsterResearch

http://www.westminster.ac.uk/westminsterresearch

Phenomenal Landscapes: exploring children's neighbourhood mobility and their experiences within three east London neighbourhoods

Weir, H.

A PhD thesis awarded by the University of Westminster.

© Dr Holly Weir, 2021.

The WestminsterResearch online digital archive at the University of Westminster aims to make the research output of the University available to a wider audience. Copyright and Moral Rights remain with the authors and/or copyright owners.

Phenomenal Landscapes: exploring children's neighbourhood mobility and their experiences within three east London neighbourhoods

Holly Weir

University of Westminster Doctor of Philosophy November, 2021

Declaration of Authorship

Meir

I, Holly Weir, hereby declare that this thesis and the work presented herein is entirely my own and it has not been submitted for any other degree or professional qualification. Where I have consulted the work of others, this is always clearly stated.

September 2021

Acknowledgements

I am indebted to the children, parents and schools involved in this study for their generous support, for agreeing to take part in the study in the first place, for their support with it as it progressed. To the children, in particular, thank you for allowing me such unique insights into your everyday lives.

I am grateful to my supervisors, Rachel Aldred and Ben Shaw, for supporting me on this PhD journey and for allowing me to pursue my own avenues and ideas with the research, whilst providing advice and guidance when needed and ensuring I remained on the right track. It has also been great to have had the network of support from my other fellow postgrads at university, who I have always been able to call on when needed.

Thanks of course to my family and friends too. In particular, to my husband lan, for putting up with me for the past four years and wondering if I will ever finish! And to my two children, Rowan and Finlay, for providing constant inspiration to keep going with it and reminding me of the importance of the work. I couldn't have done it without you!

Prologue

Before my eldest son was even able to walk, he was playing outside on the grass at the back of my house. Not the garden, but a small patch of grass accessed via our back gate and opening out onto the road. It was informally shared with our next door neighbours, though in theory anyone was allowed to use it. The fact that he could not walk, was indeed an added bonus for me as a parent as it meant that I knew if I took my eyes off him he would not go anywhere. In Hackney in inner London, this is a fairly unusual occurrence. A one year old sitting outside on their own in a public space, with their parent keeping half an eye on them whilst flitting inside the house to check on the dinner or do the washing. But this is how it was for me in 2013.

My next door neighbour's son is about five year's older than my eldest son and he was often outside playing too during these toddler days. In fact, this was one of the main reasons that we were there. His presence made this small patch of grass feel like it was a space for children to play. For me, having this boy's mother there to chat to also made the experience feel a bit more comfortable. For my son, having another child to be entertained by was great fun.

As the years have gone by, my son has got older but the playing out continues. At the age of nine, he has gone from not being able to walk to not being able to sit still, and he now has a younger brother (age seven) to play with too. There is now a football goal and basketball net placed on the said patch of grass at the back. The boys have progressed to playing *around the block* and on the other patches of grass on the estate as well as the road. Starting off with a ubiquitous Little Tikes car, they have now moved on to a go-kart. Our next door neighbours' son is a bit too cool to play out now, but he'll still have a kick around with the younger ones occasionally.

For my children, this free access to public space is fairly normal. It is what they have known their whole lives and they are used to be able to freely roam around parts of the neighbourhood after coming home from school. In theory, they are not wholly independent, although they might argue otherwise. They are always within shouting

distance of home and need to have permission from me to go out and as to how far they can go. The design of our neighbourhood is one of the things that has given me confidence in allowing the boys to go outside like this. We live on one of very few cul-de-sacs in inner London. There is no through traffic and a good amount of traffic calming means cars are virtually always travelling at low speeds. There are a number of shared grassy spaces that children can play on and use, and there are alleyways linking up the streets and allowing children to literally run round in circles. It's not perfect of course. It is still a street largely designed for vehicular movement. The roads are covered in paint telling cars where and where not to go. Bollards and fences placed at every opportunity in streetscape do the same. The majority of the public realm is taken up with parking. *No ball games* signs are evident. Children are creative though. They use those same bollards and fences to climb and swing on. The speed bumps work pretty well for jumping over on their bikes and doing wheelies.

My children are not unique, but they are deemed a rarity these days. Children are now seen outside in the public realm less than ever, particularly without direct adult supervision. There are many cited benefits of children's independent mobility, as I will discuss further in this thesis. Yet it was none of these cited benefits that drove me to give my own children freedom to roam outside. I simply did it because it was convenient and easy. In honesty, I did it less for the benefit of my children and more for my own benefit. When the children were younger and I was supervising them more closely, going outside gave us a chance to interact with neighbours and other people. It was easier being outside than being inside on my own with a one year old. As my sons have got older, they would often play outside whilst I cooked the dinner or tidied up the house. It tended to be the best way to get them out from under my feet!

Having previously worked as an urban planner, part of me wants to believe that the answer to seeing more children out in the public realm again is all about the design of the built environment. And the built environment clearly has a significant role to play. But what has always struck me about my own street and neighbourhood is that

other children don't use the environment in the same way as my own. Most of the other children on the street don't play outside like mine do. Many of my son's school friends live just over the road, yet he only ever sees them at school. Each child has a different life world. If this study were to stay wholly grounded within the built environment and urban planning fields, it may not pick up fully on how different people respond to environments in different ways. This study seeks to understand not just the form of places but their function for children, and, drawing from the field of environmental psychology, how children respond to the affordances within their neighbourhood (Gibson, 1979). Rather than measuring how much children are or are not doing, this study seeks to identify how children in inner London experience their neighbourhoods and what matters to them.

Abstract

This study explores children's neighbourhood mobility and their experiences within their neighbourhoods at different times of the year, focussing on their use of the public places and spaces within these both for travel and play. It takes a child-centred approach to the research, working with a small group of children (n=17) from three schools in Hackney, east London to better understand their neighbourhood mobility and exploring how this impacts on their well-being. It uses a mix of mainly qualitative methods, including go-along interviews, mapping exercises, focus group discussions, weekly diaries and photography. The research incorporates whole class surveys and descriptive statistics from these to support the qualitative elements. The study draws from the field of environmental psychology, to better understand how children interact with their environments, and places a strong focus on children's experiences within their neighbourhoods and the factors that influence their behaviours within them.

The children in the study moved around their neighbourhoods mostly on foot and knew them well. Being physically independent was less important to them than the level of autonomy that the children had in their use of their neighbourhoods. Being able to get around on foot helped them to develop this autonomy, even when accompanied by an adult, and these early experiences of active travel were shown to support the development of a child's future independent mobility.

The study found that the built environment plays an important role in children's use of their neighbourhoods, particularly the threshold spaces outside of a child's home, the transitory spaces supporting active travel around a neighbourhood and the destination spaces, or places to go. However, the built environment does not function in isolation. It was found that the interaction of other factors, such as social and cultural influences, individual characteristics, the school environment and the children's relationship with the natural environment, with the built environment were what influenced children's behaviour. The study draws on understanding of socioecological models and Complex Adaptive Systems. The themes of permission and

motivation are used to highlight the different levels of influence and how these factors interact to influence children's' behaviour and use of space.

By focussing on children's experiences, the study considers the impact that children's neighbourhood mobility has on their physical and mental well-being. Positive benefits are suggested with regard to their mental well-being. The study shows that children's neighbourhood mobility may help children to meet three of the basic psychological needs of autonomy, competence and relatedness.

Contents

DECLARATION OF AUTHORSHIP	2
PROLOGUE	4
ABSTRACT	7
CONTENTS	9
LIST OF FIGURES	12
CHAPTER 1: COMPLEX MOBILITIES	13
Children's Experiences of Place	16
Socio-Ecological Systems	18
Complexity as a Framework	22
Research Questions, Aims and Objectives	24
Structure	25
CHAPTER 2: CHILDREN'S NEIGHBOURHOOD MOBILITY AND INDEPENDENCE	26
Concepts of Mobility	26
Concepts of Autonomy and Independence	30
Children's Territorial Range and Activity Spaces	36
Conclusion	39
CHAPTER 3: CHILDREN'S WELL-BEING AND EXPERIENCES OF PLACE	41
Children's Mental Well-Being	43
Children's Physical Well-Being	49
Conclusion	52
CHAPTER 4: CONTEXT SETTING	53
The Natural Environment	54
The Social, Cultural and Political Environment	59

The Neighbourhood, Community and School	68
The Home Environment	84
The Individual	90
Conclusion	95
CHAPTER 5: METHODOLOGY AND TAKING A CHILD-CENTRED APPROACH	97
Child-Centred, Reflexive, Ethnographic	97
The Study and Sample Details	101
Main Methods	104
Analysis	116
Ethical Considerations	119
CHAPTER 6: CASE STUDIES AND PARTICIPANTS	121
CHAPTER 7: CHILDREN'S MOBILITY, ACTIVITY SPACES AND INDEPENDENCE	133
Mobility and Modes of Travel	135
Mobility and Use of Time	145
Mobility Throughout the Year	156
Activity Spaces and Independence	163
Transitions to Independence	174
Summary	182
CHAPTER 8: THE IMPORTANCE OF THE NEIGHBOURHOOD AND 'THIRD SPACES'	184
Threshold Spaces	185
Transitory Spaces	205
Destinations	222
The Influence of the School	240
Summary	254
CHAPTER 9: DISCUSSION	256
Forms of Mobility	257
Space. Permission. Motivation	260

Making the Link to Well-Being	273
CHAPTER 10: CONCLUSIONS	280
Implications for Policy and Practice	283
Scope for Future Research	285
EPILOGUE	287
APPENDICES	289
Appendix 1: Go-Along Interviews Session Plan	289
Appendix 2: Travel Diary Template	291
Appendix 3: Whole Class Questionnaire	292
Appendix 4: Parent Questionnaire	296
Appendix 5: Summer Term Children's Questionnaire	311
REFERENCES	315

List of Figures

Figure 1.1: The child's life space, adapted from Joerchel (2015) and based on Muchow	21
Figure 1.2: Systems map of factors affecting child independent mobility (key: IM = independent mobility	/;
NDAI-C = Neighbourhood Destination Index-Child), from Badland et al (2016)	23
Figure 2.1: % 5-10 year olds in England travelling to school alone (Department for Transport, 2019)	30
Figure 3.1: Core dimensions of psychological well-being and their theoretical foundations From Ryff (20)	14,
11)	44
Figure 4.1: Summary of land use - places shared by the children of three or more families unaccompanie	d by
adults (Hart, 1979)	56
Figure 4.2: Campaign poster from Ministry of Transport (1982; cited in Hillman et al, 1990)	65
Figure 5.1: Table summarising the main methods used in the study	105
Figure 5.2: Example of a marked up map from the workshops	111
Figure 5.3: Example of one of the children's drawings of the seasons	112
Figure 5.4: Table showing the codes and sub-codes used in analysis	117
Figure 6.1: Map showing Hackney's location in London (adapted from Nilfanion, 2021)	121
Figure 6.2: Map of the neighbourhood around Oakley school	122
Figure 6.3: Map of the neighbourhood around Wigmore school	126
Figure 6.4: Map of the neighbourhood around Mansfield school	129
Figure 7.1: Model showing the different forms of neighbourhood experiences that the children had	147
Figure 7.2: Melissa's drawing of her favourite place throughout the seasons	159
Figure 7.3: Rebecca's drawing of her favourite place throughout the seasons	159
Figure 7.4: The children's mapped activity spaces - Wigmore school	164
Figure 7.5: The children's mapped activity spaces - Mansfield school	165
Figure 7.6: The children's mapped activity spaces - Oakley school	166
Figure 8.1: Photo of Sophia's street	187
Figure 8.2: Photo of Rowan and Leo's street	188
Figure 8.3: Photo of Rebecca's street	190
Figure 8.4: Photo of the view onto Henry's street	191
Figure 8.5: Photos of Simon's block of flats	192
Figure 8.6: Photo of Zaidee's block of flats	193
Figure 8.7: Photo of the grassy space outside of Melis's home	196
Figure 8.8: Photo of the play space and road next to Ashok's home	197
Figure 8.9: Photo of the locked space next to Ashok's home	198
Figure 8.10: Photo of the road space outside Rafya's home	199
Figure 8.11: Photo of the estate road where Montel would race his bike	200
Figure 8.12: Simon's photo of the road taken from the footway	208
Figure 8.13: Photo of the crossing point next to Oakley school	210
Figure 8.14: Photo of the street that Henry was not allowed to cross	211
Figure 8.15: Photos of the gated entrance and routes around the Frampton Park estate	216
Figure 8.16: Photo of the pedestrian only entrance to Frampton Park estate	216
Figure 8.17: Photo of the pedestrian only path that Marianna used to reach Church Street	217
Figure 8.18: Photo of the footpath to the leisure centre and ball cage	219
Figure 8.19: Photo of the estate play space near to Simon's home	224
Figure 8.20: Photo of the ball cage on Frampton Park estate, near Oakley school	226
Figure 8.21: Photo of the 'sand park' play space on Frampton Park estate	227
Figure 8.22: The variety of local shops that the children visited in their neighbourhoods	229
Figure 8.23: The youth centre near Oakley school	234
Figure 8.24: Montel's activity space and the locations of Mansfield and Oakley schools	242
Figure 8.25: Photo of the school street signage at Mansfield school	244
Figure 9.1: Model showing the different forms of neighbourhood experiences that the children had	258
Figure 9.2: Systems map of factors influencing children's neighbourhood mobility	261

CHAPTER 1: Complex Mobilities

"Our greatest period of geographical exploration is that found in each of us - in our childhood" (Hart 1979, 3)

Current discussion and debate around children's use of public space in the UK often paints a stark picture of what children's lives have become. It has been said that children have lost years' worth of freedom of movement (Gill, 2007). It is easy to see where this concern stems from, reflecting some of the key facts set out below with regard to children's lives but, as this chapter will go on to discuss, it may not tell the whole story.

Evidence suggests that children often have limited access and permission to public space and challenges around using this space independently (Karsten, 2005; Bhosale, Duncan and Schofield, 2017). Many children are now spending less time outdoors than in the past and with more limited freedoms when they do go outside (Christensen and O'Brien, 2003). Children's physical activity levels have been shown to be declining (Sport England, 2021). Childhood obesity levels continue to rise, with obesogenic environments cited as one of the explanations for this (Edwards et al, 2010). Children's mental well-being is also of concern. The UK tends to perform poorly on international comparisons of child well-being (Statham and Chase, 2010) and children's use of space has been shown to be an indicator of well-being for children that is worsening over time (Bradshaw, 2005).

Children's independent mobility, a term originally coined by Hillman et al (1990) referring to the licence that children are given to go out on their own, has been reducing consistently over the past four decades (Shaw, et al., 2015; O'Brien, et al., 2000). Back in 1990, Hillman et al (1990) highlighted the changing nature of travel patterns and, at that time, the increasing dominance of cars on the road, which was leading to an increase in child road casualties. Since around the time of the birth of the urban planning system in the UK, there has been a growth in car ownership and car journeys across the UK, which increased from the 1940s up to 1990 (Metz,

2015). This dominance of the car and a focus on quick movement rather than spaces for people to meet and spend time, has led to a planning system and an urban structure that often appears to ignore children's needs in the wider public realm (Wood, Bornat and Bicquelet-Lock, 2019). Attempts to meet children's needs in public space have tended to be through the sole provision of schools and playgrounds. Outside of school, the playground is often seen as providing sufficiently for children's needs, but there is evidence that these spaces are not necessarily what children desire (Horschelmann and van Blerk, 2013; Bishop and Corkery, 2017).

Although there has been some reversal in car usage and travel trends since the 1990s, particularly in cities such as London (Transport for London, 2016), when it comes to looking at children's travel and mobility a different picture emerges. In spite of the reductions in number of miles driven per person, cars still tend to dominate the transport network and are often cited as a barrier to children's active travel (Mitra, 2013; Kelty, Giles-Corti and Zubrick, 2008). Very few children travel unaccompanied and it is simply not possible to do so if travelling in a car. The National Travel Survey for England shows that 88% of children aged 7 to 10 and 31% of children aged 11 to 13 are usually accompanied by an adult on the trip to school (Department for Transport, 2014), a continued increasing trend from previous surveys. The main reasons cited for accompanying younger children are traffic danger and, for older children, convenience and distance. The perception that children are not welcome in many public spaces pervades, with the ubiquitous 'no ball games' signs still being common place.

Put together, the evidence above creates a worrying picture of children's lives in the UK, but does this paint a realistic picture of *all* children's lives? It is easy to bring the individual pieces of evidence together and suggest that all children are, for example, inactive, indoors and lacking independence. But is this the reality for all children or is a more nuanced approach required to fully understand how children live their public lives and use public space in the present day? Other research that considers children's use of public space more broadly suggests that it may not be as bleak a

picture as is sometimes suggested (Mikkelsen and Christensen, 2009; Nansen et al, 2015; Han et al, 2020).

What is also unclear by looking at individual pieces of evidence, is the impact that any changes have had on children themselves, how they feel about them and how their experiences have changed. There are many specific cited benefits of children's independent mobility, such as improved skill in navigating the environment (Mackett et al, 2007; Carver et al., 2008; Rissotto and Tonucci, 2002; Ahmadi and Taniguchi, 2007; Rissotto and Giuliani, 2006) improved social capital and cohesion (Weller and Bruegel, 2009) and increased levels of physical activity in some instances (Schoeppe et al, 2014; Jago, 2017; Beunderman, 2010). The specific evidence on how children's independent mobility impacts on children's experiences of place is often mixed however. This suggests a need to look past the numbers, to develop a more in-depth understanding of children's experiences of place throughout the year. It highlights a need to consider how any measures reflect how the children themselves feel and the various factors that come together to impact on their behaviours.

Children's Experiences of Place

"There is generally very poor knowledge of where children would like to go - or indeed where they do go - outside the journey to school." (Beuret 2016, 8)

Experience relates to how children understand, interpret, negotiate and feel about their daily lives and to how they interact with their environment. Hart (1979, 4) describes the elements of a place that a child experiences as the "phenomenal landscape", meaning the "landscape that exists for him or her" and that will develop as they interact with it.

People get to know a place through their engagement and encounters with it (Malone, 2016) and this, in turn, impacts on their experiences of it. It is therefore important to consider not only *how* children use their neighbourhoods and the places around them, but also how they *feel* about what they're doing (Kirby and Inchley, 2013; Darker et al, 2007). Darker et al (2007) highlight the importance of understanding the psychological meaning and value of behaviours, in order to better understand how to influence these. In relation to how children use their neighbourhoods, this highlights the importance of identifying the features of a neighbourhood that are important to children, as well as identifying how children experience these features and how different children respond to them. The use of the term neighbourhood throughout this study refers to the child's own perception of what this is, but is intended to incorporate the places and spaces that they visit locally. A fixed, spatial boundary has not been applied as it is recognised that each child might perceive their neighbourhood area differently. Although some seek out to define neighbourhoods on a strictly spatial level (Jenks and Dempsey, 2007), for this study this was not felt to be appropriate.

Linked to understanding children's experiences of place and the external influences upon these, is also the impact that these experiences have at the individual level.

Although the experiences themselves are important to understand, an understanding of the impact that these are having on a child's well-being is also of importance in

beginning to comprehend how they influence the child's wider life. As McKendrick (2014) argues, children's well-being is shaped by where they live.

The concept of affordances (Gibson, 1979; Heft, 1989) can be used to consider what a place offers a child and how it is characterised. This concept enables consideration of not only the physical features of a place, but how they are perceived and valued by different groups: in this case, children. Appropriate affordances within a place will support children to form attachments with it (Low and Altman, 1992) as well as to form a place identity. Proshansky and Fabian (1987) highlight the importance of place identity and how it is influenced by the social meaning that are attached to places and spaces. This is of particular importance in the neighbourhood setting where an awareness of these social meanings is important in knowing how to act in and navigate this environment. This highlights the inter-relationship between both the physical aspects of place and its meanings, also noted by Raymond, Kyttä and Stedman (2017). It is a combination of both a physical place and its social meaning or its perceived affordances, that influence how a person uses it and engages with it.

Socio-Ecological Systems

There are a wide range of social, physical, political and individual factors that will influence what a child does and how they behave. Although the physical environment plays an important role in influencing behaviour, the physicality of the environment does not determine behaviour and there are other factors involved that will do this. This could be cultural associations or broader policy influences, for example. This thinking is reflected in socio-ecological models, which consider the influence of both the physical and sociocultural surroundings (Bronfenbrenner, 1999).

In 1977, Bronfenbrenner (1977) highlighted how, in relation to his studies of child development, it was important not just to consider the child and their immediate environment, but the impact of the wider environment too, the social setting in which the person lives and the interactions within these. He divided the person's/child's environment into five systems: the microsystem, the mesosystem, the exosystem, the macrosystem, and the chronosystem. At the centre was the microsystem, which refers to those things that have direct contact with the child in their immediate environment, and this spans out to the chronosystem, giving recognition to all environmental changes that occur over a lifetime. Coming from a background in child development, Bronfenbrenner (1974) was frustrated with studies taking a 'unidirectional' focus and only considering the influence of one individual level factor at a time. He highlighted that children have a complex relationship with the world that is determined by different social and physical settings, and that all of these different levels of influence need to be considered.

Prior to Bronfenbrenner, one of the first to consider how children relate to the places they inhabit specifically was Martha Muchow. Muchow's seminal study on the life space of the urban child, written in the 1930s and republished in English more recently in 2015 (Mey and Günther, 2015), demonstrates a clear but complex link between person and environment, with a focus on both the objective features of spaces and places as well as the subjective experience of the child within it. Muchow

took a strongly child-centred approach to her work, demonstrating an awareness of the different perspectives of children and adults (Mey and Günther, 2015). As described by Joerchel (2015), her work differentiates between the world in which the child lives (the objective, physical and structural surroundings), the world that the child experiences (the subjective experience of the physical surroundings), and the world lived by the child (combining the objective and subjective elements). The interaction between the objective and subjective features of space highlights the impact that children can have on space through their behaviour (Joerchel, 2015).

Over 40 years on from Muchow's work and at around the same time as Bronfenbrenner, Roger Hart (1979) explored, in great depth, children's experiences in the public realm and suburban life and provided an in depth look into the public lives of children at that time. Robin Moore's (1986) work continued this focus with the publication of his book in 1986, considering play and place in child development, also noting the different experiences that children within the same neighbourhood could have. With their interests in environmental psychology, both Hart and Moore noted that, at that time, there was not much other research on children's everyday surroundings. Since then, Kreutz's (2015) study of the Australian indigenous community also focuses on the connections between children and their environment and provides an in-depth look at children's lives.

More recently there has been an intensification in research exploring the determinants of children's mobility, drawing on Brofenbrenner's work in particular and and using a socio-ecological approach (Han et al, 2020; Brussoni et al, 2020; Lee et al, 2015). There is now increasing understanding that factors need to be considered holistically and within a broader context of where the child is situated (Marzi and Reimers, 2018; Crawford et al, 2017; Foster et al, 2014; Vlaar et al, 2019; Mitra, 2013; Mikkelsen and Christensen, 2009). In their meta-analysis of the relationship between the built environment and children's independent mobility, Sharmin and Kamruzzaman (2017) note that where they found statistical consistencies, it was often due to differences in contextual and cultural factors, or individual characteristics of the children, such as gender, rather than the built

environment. Other studies have demonstrated the relevance of considering other factors, such as parental perceptions of safety, community cohesion, cultural perceptions towards unsupervised outdoor play and the quality of the environment as influences on children's mobility (Wolfe and McDonald, 2016; Qiu and Zhu, 2017; Brussoni et al, 2020; Badland et al, 2016).

Drawing on the work of Muchow and of socio-ecological models, a conceptual framework has been developed for this study to help to visualise the interactions between the different factors on a child's neighbourhood experiences (figure 1.1), separating out the different influences on a child's life, beginning with the individual and then spreading out as the influences broaden. It highlights the relevance of the child's experience, recognising that some of the influences are likely to have more impact on a child than others. Linking to Muchow's previous work, the framework recognises the difference between the space lived by a child and the space in which the child lives. It reflects that it is the space lived by a child that they will have the closest connections to and that is likely to have the most impact on their behaviours, but also that demonstrates the importance of subjective experience too. This framework draws on socio-ecological models, to add consideration of the societal and political environment and the natural environment, as was also proposed by Joerchel (2015). With regard to the natural environment, children's neighbourhood mobility should be something that occurs throughout the year and not only in the summer months and is important to consider (Tucker and Gilliland, 2007; Ergler, Kearns and Witten, 2016).

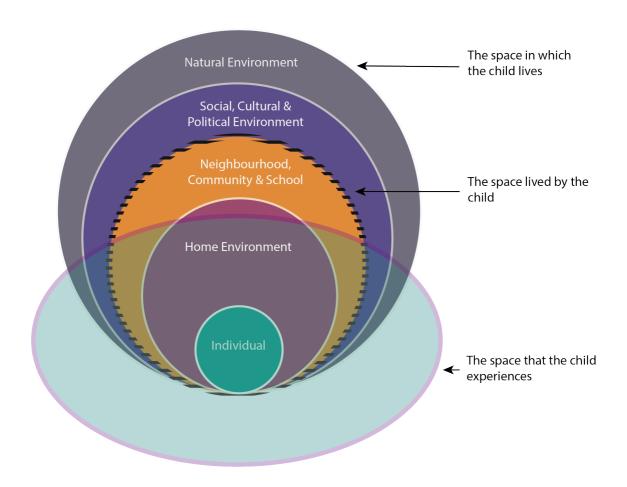


Figure 1.1: The child's life space, adapted from Joerchel (2015) and based on Muchow

The study was strongly focused on the neighbourhood level and driven by those physical features of the built environment that impact on children. However, it also draws on understandings of socio-ecological models in order to highlight the impact of other factors. The study considers the influence of this wider system within which children sit and how it relates to the built environment features.

Complexity as a Framework

The framework developed in figure 1.1 highlights the importance of considering the different levels of influence on children's mobility. With the individual at the centre of it, in this case the child, it enables any influences to be considered from a child's point of view. It also helps to clarify the study's focus and remit.

What this type of socio-ecological model does not do is to explicitly consider the interaction or inter-dependencies between different factors. Taking this understanding one step further, it is possible to draw on theories of Complex Adaptive Systems (CAS), which focus on the interactions between components with the aim of creating a network of relationships (Glouberman et al, 2006). These are characterised by both the multiple levels of influence evident, as in socio-ecological models, but also the feedback loops that are created by the interactions between factors, and are adaptive over time as things change (Keshavarz et al, 2010). Rutter (2012) notes that CAS can help with starting to move from "evidence to knowledge" (657) and making sense of the evidence collated. Glouberman et al (2006) also notes the importance of delving deeply into local scenarios in order to develop knowledge. Although there is said to be a lack of a thorough definition of CAS (Wallis, 2008), these core principles behind it have also been used as part of a conceptual framework to support analysis (Keshavarz et al, 2010).

Badland et al (2016) have developed a model to help to visualise the complexity of children's independent mobility, which draws on thinking around social ecological frameworks (see figure 1.2) as well as CAS. It highlights both the different levels of influence and begins to explore the interactions between these.

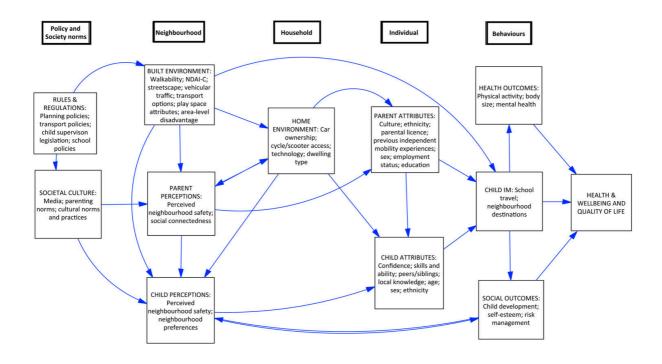


Figure 1.2: Systems map of factors affecting child independent mobility (key: IM = independent mobility; NDAI-C = Neighbourhood Destination Index-Child), from Badland et al (2016)

This study also draws on understanding of CAS to begin to explore the interactions and connections between the factors identified using the socio-ecological model and to consider how children's behaviours are influenced. It does not set out to develop a detailed model of this, as it retains a primary focus on the built environment, but rather uses understandings of CAS to influence how information gained through the study is understood and to recognise that children's experiences result from a complex interaction between factors.

Research Questions, Aims and Objectives

The thesis that follows is guided by the question:

How do children use their neighbourhoods and what factors are important in influencing their experiences?

On the basis of this question, the aims of the research are as follows:

- To develop an in-depth understanding of children's public lives and their mobility within their neighbourhoods at different times of the year
- To understand the impact of the built environment on children's experiences and behaviours in their neighbourhood
- To understand how social and cultural influences impact on children's use of the built environment in their neighbourhood
- To understand the political and regulatory influences impact on children's use of the built environment in their neighbourhood
- To understand how children's relationship with the outdoors affects how they use their neighbourhood at different times of the year
- To consider how a child's neighbourhood experience might impact on their well-being
- To prepare both planning and transport policy recommendations based on findings and provide findings to support improved policies on children's movement and play

Structure

This thesis is split into nine further chapters. The first five chapters, including this one, provide a background to the literature that has informed the study. Chapter 2 explores broad themes around children's mobility and independence. Chapter 3 then introduces the relevance of children's well-being and how this can be measured within a predominantly qualitative study such as this. Chapter 4 introduces the various factors that have an influence on children's mobility. This chapter works through a range of sections, starting from the influence of the natural environment and working through the societal and neighbourhood levels to that of the influence of the individual.

Following on from this review of the literature, chapter 5 describes the methodology used for the study and chapter 6 introduces the case study schools and the individual participants involved. Chapter 7 then begins the discussion of the findings from the study, with a focus on the children's mobility and their independence, taking an in-depth exploration of the children's use of public space in their neighbourhoods. Chapter 8 focusses on the more specific impact of the built environment on the children's use of space, whilst not ignoring the other factors that influence this. Finally, chapter 9 brings the main findings of the study together and discusses these in the context of socio-ecological models and CAS, and relevance of these to children's well-being.

CHAPTER 2: Children's Neighbourhood Mobility and Independence

This chapter works through the main concepts in relation to children's mobility, autonomy and independence. It introduces the main considerations within these, which will then be put into context in later chapters, where the discussion will move on to the factors that impact on children's neighbourhood mobility and the influence of the built environment.

Concepts of Mobility

"The reason for going has been forgotten" (Engwicht 1992, 17)

The understanding of mobility and mobilities that forms the focus of this study reflects recent thinking that distinguishes mobility from movement (Urry, 2007). It is used in describing more than the physical movements of children and instead focuses on movements that have meaning. These movements will have elements of both social and cultural enquiry (Cresswell, 2006). When these movements take place within a child's neighbourhood they impact upon how they will experience a place. These *more than* movements are children's mobilities.

Children don't simply walk in a straight line from point to point, unlike many adults. Children's movements and walking in the outdoors are a sensory experience that often involve meandering, playfulness, wonder, discovery and adventure, particularly when they are unaccompanied (Mitchell et al, 2007; O'Brien et al, 2000; Mackett and Paskins, 2008; Ross, 2007; Romero, 2015; Moore, 1986), something that tends to be poorly understood in current society (Tainio, 2018). Children often just walk for walking's sake with no particular destination in mind, which then becomes a form of play (Horton et al, 2014). Their walks my have no particular purpose, corresponding to what is often simply defined as play, prioritising means over ends (Pellegrini and Smith, 1998). Moving at a slower pace can encourage interaction with the

environment and provide an opportunity to take in the surroundings, as well as being for socialisation (Lee and Ingold, 2006). As Lee and Ingold (2006) state, "walking around is fundamental to the everyday practices of social life." (67)

When considering how children get around their neighbourhoods, it is important to consider more than just their travel to go places. Recent discussion over concepts of mobility also note the relevance of this, highlighting the fact that mobility is more than just about getting around a place, but is about spatial inter-relations (Christensen et al, 2017). Back in 1992, Engwicht (1992, 61) suggested that "the role of transport is to maximise exchange". He argued that cities and other urban areas should be designed to *minimise* travel and that people should not need to travel far to be provided with a range of opportunities for exchange. If given the opportunity, children can provide an insight into how this theory can work in practice. In terms of a child's freedom to move, although they might be restricted in how far they can travel, within an adult defined boundary they are often allowed to move freely. Horton et al (2014) found that children were often reassured by these adult defined boundaries. This may have meant that for specific journeys to a destination they were not allowed to travel unaccompanied, but they were still allowed independence in their own neighbourhood, which provided an important social experience.

Middleton (2016) also notes the importance of everyday urban walking and how it can lead to social interaction with others. The school journey is an example of this and may provide a start point for further interactions and future trips. These journeys to school can also be playful (Pooley, Turnbull and Adams, 2005; Ross, 2007). In a study in Scotland, Ross (2007) explored the experiences of children's journeys to school and highlights the importance of their active and imaginative engagements with the environment as part of this. The children did not see the journey as just about getting to school. The period before school starts was found to be a significant time for children's play and social interactions. These journeys were also always made independently, sometimes with older siblings or friends and in most weather conditions. Romero (2015) also found, in her study of walking to school in Australia,

that a child's experience of their walk to school was related to the playful and sensory explorations they discovered on the way.

The Backseat Generation

This evidence highlights the importance for children of being able to engage with their neighbourhood in their journeys through it. Yet nearly half of children in the UK are now driven to school in a vehicle (Department for Transport, 2018) and the further children have to travel, the higher the levels of car usage are.

In 1938, there were just under 2 million cars in use in Britain (Thomson, 2013; cited in Cowman, 2017). There are now 37.3 million vehicles licensed for use on British roads (Department for Transport, 2017b). The period between 1955 and 1970 saw a particularly significant increase in cars, with 86% of households lacking regular access to a car at the start of this period and this having dropped to 50% by 1970. In 2017, 77% of households in the UK had access to a car (Department for Transport, 2017b). In addition to car user dominance on the road, which has affected people's ability to use the streets as they used to, the increase in car ownership has also enabled people to travel more and lifestyles and daily routines have gradually shifted to being set up on this basis. This has led to a general increase in pace of life and an expectation of being able to travel further within a shorter time scale, something which is often only possible using a car (Urry, 2000; 2002). Figures from the Department for Transport's National Travel Survey (2017a) show that those who do not own a car travel less than a third of the distance throughout the year than those who do. This increased distance travelled may not only impact on the numbers of vehicles on the road at any one time, but also on a child's daily routine.

Across the UK up until the 1990s, the percentage of journeys to work by car was increasing, rising from 9% in the 1930s to 53% in the 1990s (Pooley and Turnbull, 2000), with a corresponding decline in the percentage of journeys on foot. This trend affected children's travel due to to trip-chaining. Whereas in the past, different trips would have taken place independently, this increase in car use accompanied with

less time and more to do, led to trips, such as the trip to school and work commute, being linked together into a single multifunctional trip, most commonly by car. Tripchaining is more likely if someone has children, due to the often more complex nature of the trips they wish to undertake (Hensher and Reyes, 2000). Karsten (2005, 283) refers to this phenomena of children being transported by car as the "backseat generation."

However, in London and some other cities, car use has been declining since the 1990s, a phenomenon that has been termed peak car (Metz, 2015). Metz (2015) notes that the share of journeys taken by car in London has decreased from 50% in 1990 to 37% in 2012, and Pooley (2011) highlights that in spite of the changes, a dominance of walking for short trips in urban areas still prevails. In fact, the time spent travelling and the number of journeys made have not changed all that much in recent years (Department for Transport, 2019), even if the distance travelled has. Children are in the backseat, but not all of the time.

Much has changed within children's mobility in the past decades, but elements of everyday mobility have also stayed the same. For children, in spite of the car being much more a part of everyday life than a century ago, there are still a high number of recorded short trips that are walked and active mobility for children in their neighbourhoods has not disappeared altogether. It is important not to overlook these and to consider how these fit into children's wider mobility in what might otherwise be a more car dominated environment than the past.

Concepts of Autonomy and Independence

"We are fully [independent] only when we are free from dependence on others and that freedom from dependence on others means freedom from any relations with others." (Anderson 1996, 43, cited in Abebe 2019)

When considering children's mobility and everyday travel, the term 'independent mobility' frequently comes up. The concept of children's independent mobility is complex and, at the same time, easy to over simplify. As Mikkelsen and Christensen (2009, 53) note "children's mobility is far more complex than its representation through the notion of children's independent mobility."

A term originally coined by Hillman et al (1990), it is known that children's independent mobility has been falling in recent years and is particularly low in the UK when compared to other countries (Shaw et al, 2015; O'Brien et al, 2000). Shaw et al (2013) found that between 1971 and 2010 the percentage of primary school children who were allowed to travel home from school alone dropped from 86% to 25%.

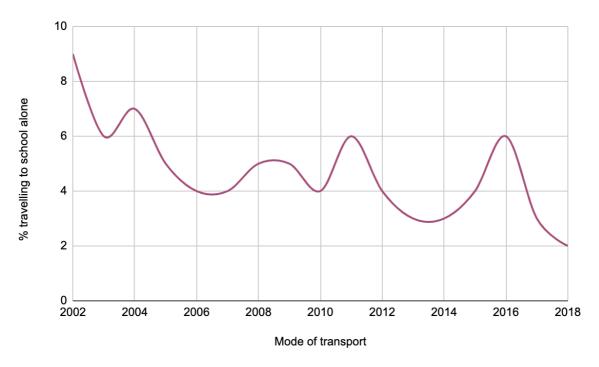


Figure 2.1: % 5-10 year olds in England travelling to school alone (Department for Transport, 2019)

The National Travel Survey in England suggests the figures might be much lower than this now, but also highlights a gradually decreasing trend, as shown in figure 2.1 (Department for Transport, 2019).

Hillman et al's (1990) influential study titled 'One False Move' was a clear response to, often misleading, messages from the UK Government on road safety and child fatalities. They believed that a reduction in child fatalities did not necessarily equate to a safer road, but rather a road that children were good at avoiding using. Hillman et al were quite clear on what they were measuring and labelling as independent mobility and a version of the study was also repeated in 2015 (Shaw et al, 2015). Six measures were set out that were intended to measure a child's potential for independence within their neighbourhood: allowed cross main roads alone; allowed to go to places other than school alone; allowed to come home from school alone; allowed to use buses alone; allowed to ride a bike on main roads (alone - 2015 study); allowed to go out alone after dark; allowed to cross main roads alone. All of these measures related to a child's ability to get around and get to places independently on their own, hence the name independent mobility. In subsequent years, the concept of independent mobility has been explored by some in more depth (O'Brien et al, 2000; Tranter and Pawson, 2001), often taking slightly different approaches to the concept and defining it in different ways (Mikkelsen and Christensen, 2009).

Marzi and Reimers (2018) highlight how there are four main indicators of independent mobility that have been used in research. There are those of children's independent mobility license, destination, time and range. These are often explored individually and although it is possible to measure them in this way, there is a clear overlap between them, with each one being related and working inter-dependently with the others.

Autonomy versus Independence

When looking at the indicators that Hillman et al (1990) and subsequent studies used, it is clear that they were measuring either the licence granted by the parent for certain activities or simply where a child went, rather than notions of independence and what this might mean to the child. The measures used have been useful in providing clear evidence to show that children now spend a greater proportion of time with their parents when within their neighbourhoods than they used to and are now more physically constrained in everyday space (Christensen and O'Brien, 2003). However, the broader meaning of independence and its impact on the child, as well as the child's perception of this, is less evident from these measures. It is suggested that considering a child's feelings of autonomy in their travel behaviours, rather than their independent mobility, may help to provide a deeper understanding of their behaviours and how they feel about them. This reflects discussions by Mikkelsen and Christensen (2009), who note the importance of *inter-dependence* in children's mobility.

Autonomy can be seen as distinct to independence in that it is about a person feeling in control of their actions and the decisions that they make, as well as a feeling of being able to shape their world. This definition of the term is used when considering a person's psychological well-being (Ryff, 1989) and has been found to be important in influencing subjective well-being. Independence, on the other hand, often takes on a more physically bounded notion of being able to do something on one's own.

In terms of children's mobility, autonomy can therefore refer more to how a child *feels* about what they are doing and how empowered they feel, rather than *what* they are doing or *who* they are with. The difference between the two terms becomes more significant when it is considered that autonomy is often reliant on interdependencies. As Abebe (2020) notes in his discussion of children's agency, children can be both dependent and independent at the same time. When considering how children get around their neighbourhoods, these inter-dependencies

are often other people. As Devine, Camfield and Gough (2008, 105) note, "autonomy can coexist with substantial relationships of dependence."

Autonomy has been shown to be important for children's well-being (Ryff, 1989) and the aforementioned inter-dependencies have been found to be important in developing autonomous regulation (Ryan and Lynch, 1989). In Rees et al's (2010) survey of children's well-being in England, they found that one of the key factors that was important for children was a sense of autonomy and freedom to choose. Rees et al state that for children, the right amount of autonomy depends on both choice and control and that this will vary depending on the child's age and experience. This also links to feelings of safety and security within the neighbourhood. Those children who did not feel safe at home were more likely to have low levels of well-being and, although they wanted to have autonomy and freedom, they also needed to feel safe (The Children's Society, 2012). Csikszentmihalyi (2014) notes that the experience of freedom is an important dimension in everyday life. Intrinsically motivated experiences where autonomy is established are characterised by a sense of competence and a positive sense of well-being, which are particularly important in children's development (Fattore, Mason and Watson, 2016). This evidence suggests that there is more to a child's autonomy in their neighbourhood journey than simply walking to school on their own. It is about having a sense of choice and control over the decisions that surround these journeys and the use of their neighbourhoods as a whole.

The Social Side of Autonomy and Independence

If independence is defined as being alone, then it is argued that it does not give recognition to the importance of autonomy or the social aspects of a child's life beyond the physical presence of adults. Children may not always want to encounter places alone (Sharpe and Tranter, 2010) and may sometimes feel safer and more secure with an adult (Solomon, 1993) as well as with other children. In Fattore, Mason and Watson's (2016) study from New South Wales in Australia, various dimensions of children's lives are explored in relation to their well-being. Children's

free time and free play, where they could make decisions for themselves, were found to be essential to their sense of well-being and what the children considered to be most fun, but this was always with other children.

Children are not always totally independent in their activities and what motivates them and gives them the enjoyment, it is argues, is their autonomy. One of the main features, historically, of seeing children outside on the streets was that they would be with their peers and the street functioned for them as a meeting place to roam about and play (Mikkelsen and Christensen, 2009; Karsten, 2005; Opie and Opie, 1969). Historical accounts of street play note that there was nearly always a mother in shouting distance if something happened to one of the children (Cowman, 2017). Mikkelsen and Christensen (2009) argue that using the term independent implies that a children are essentially dependent and does not take into account their own perceptions or meanings. This also chimes with Pooley's (2011) analysis of children's mobility and the importance of trying not to take an adult-centred view of children's behaviours, both past and present, in order to fully understand the complexity in their everyday mobility.

In their book on how mobility has changed throughout the twentieth century, Pooley, Turnbull and Adams (2017) discuss how children often want to spend time with other children as well as with their parents and that their priority is not always to move around on their own. Bourke (2017) explored children's walks in Dublin and found that all of the children liked to have company as they walked, most with other children but some with adults too. Others have found that companionship was particularly important to children and that they did not want to be entirely independent (Romero, 2010; Nansen et al, 2015; Bourke, 2017). Children can find interacting during travel desirable and walking, in particular, can be an opportunity to be with family and friends and to socialise (Kirby and Inchley, 2012; Panter et al, 2010). Studies have also found that both children and parents saw time in the car as a chance to talk and connect without distraction (Fotel and Thomson, 2002; Egli et al, 2019).

The role and usage of mobile phones is now also an important factor to consider when exploring children's autonomy and independence. In a study by Davie, Panting and Charlton (2004), it was found that 45% of 10 and 11 year old English children owned a mobile phone. Children said that they felt safer with a phone and parents were more likely to allow their children some independence if they were able to contact them via phone, as was also found by Riazi et al (2019). Strandell (2014) notes that even when children walk home without an adult, their mobility is still regulated by the presence of their mobile phone. There are questions raised in these studies, again, about what independence means to a child and whether the children felt autonomous in their actions as a result of this surveillance.

As Benwell (2013) notes, children don't always see adult boundaries and rules as negative and he calls for a more sensitive understanding of children's experiences and the concepts of authority, autonomy and restriction. Conversely, Goodman et al (2014) observed that travelling without an adult did not always coincide with feelings of independence for young people. Drawing on this literature, this study takes a similar view, focussing less on children's physical independence and more on their feelings of control and autonomy over their environments. It bases its arguments on the understanding that a more nuanced approach may be needed to independence that asks what children think and how they feel about their neighbourhood experiences, not assuming to know what is best for them.

Children's Territorial Range and Activity Spaces

"[Territorial range] embraces the totality of a child's space-time domain - of familiar places close to home as well as a constantly expanding boundary condition, leading to unfamiliar, challenging encounters in new places." (Moore and Young 1978, 91)

The concept of territorial range begins to bring discussions of children's mobility, autonomy and independence together. Moore and Young (1978) define it as encompassing consideration of both children's use of space and time and it is this broader definition that is relevant here. Home range and activity spaces are also terms frequently used to consider how children use their neighbourhoods and are often used interchangeably with territorial range, though tend to be slightly more focused on the distance children travel away from home in the course of their outdoor play and leisure pursuits (Matthews, 1992).

The concepts of territorial range and activity spaces allow for consideration of how people use the spaces within their neighbourhood and are used as a measure to try to better understand a child's broader mobility patterns and their relationship with their neighbourhood, as highlighted by Villanueva et al (2012). The concepts focus on distance travelled, measured in all directions. They can also highlight particular barriers to children in the built environment, physical or otherwise. Han et al (2020), for example, note the influence of main roads as often representing a boundary to a child's activity space. Villanueva et al (2012) found that children living on busy roads had a reduced activity space, likely because they were only travelling one way and not across the road. This highlights the importance of not just how far a place is but also the barriers that exist to get there.

Research on the theme of children's territorial range and activity space appears to have begun with Moore and Young's (1978) discussion of it and in Hart's (1979) book on Children's Experience of Place in the late 1970s. Since then, there have

been a number of studies exploring the theme. In Moore's work (1986), he notes the difference between a child's habitual domain, their frequented domain and their occasional domain. The habitual domain is defined to include those spaces that a child visits on an almost daily basis. The frequented domain is defined as those spaces that a child visits periodically but not on a daily basis, and the occasional domain is defined as those spaces that a child may have visited on a limited number of occasions. This touches upon the importance of the amount and quality of time spent in a space, as well as the distance travelled, as also highlighted by Marzi and Reimers (2018). This framework for assessment of activity spaces is used by Loebach and Gilliland (2016) in their study of 9 - 13 year old children's range from London, Canada. They found that when separating out the types of range in this way, although the children's frequented range may have been reasonably large, their habitual activity space was often particularly small and there was a notable difference between the two measures. Activity spaces have also been found to be strongly impacted by the key fixed locations of the individual, which in the case of children is often their home and their school.

Evidence suggests that children's activity spaces have been reducing in size (Kinoshita, 2009) though there are a lack of longitudinal studies to fully quantify the changes that have happened over time. There is a tendency to assume that a larger activity space is better, whereas a smaller space may simply mean that travel further afield is not necessary (Babb et al, 2017). These conclusions, it is argued, may not tell the whole story. They can ignore a detailed consideration of what drives the size of a child's activity space or of what is important to the child. This is highlighted in a Finnish study by Broberg, Salminen and Kyttä, 2013) with children of ages 10 to 15, who explored children's travel to their meaningful places. They found that children in higher density areas had more independent mobility but took part in less active travel than those in less dense areas, highlighting that distance travelled would not give a full picture of a child's neighbourhood experience. This is also explored by Han et al (2020) who highlight the importance of the proximity of destinations and places to go in determining what a child's activity space might look like, as well as the progression

of this as children discover new spaces. Weller and Bruegel (2009) sum up some of the complexities of trying to define activity spaces, stating that

"some children are not permitted to travel far but may enjoy a great deal of freedom within a small locality, whilst other children may travel unaccompanied over several London boroughs to get to school and yet are not allowed to play in their local park." (633)

Conclusion

This chapter has revolved around an examination of children's mobility and what this means, as well as considering the relevance of both children's autonomy and independence. It concludes in stating that in order to develop a deeper understanding of children's lives there is a need not be overly rigid with such things as measuring distances travelled or who a child was with. Rather, it is more relevant to try to understand how these movement patterns fit into children's lives in a more holistic way and not to ignore the complexities that exist within this. The importance of children's *inter-dependent* mobility and the relevance of group composition, collaboration and compromise when assessing how mobile children are should not be overlooked (Mikkelsen and Christensen, 2009; Nansen et al, 2015). As Murray and Cortés-Morales (2019) highlight, there is a need to look at the networks of relations that children form and their inter-dependencies of movement, to gain a full picture of children's true mobility.

This review has shown that when it comes to children's movement around their neighbourhoods, there is often a strong focus in the literature on travel to go places, in particular the trip to school. There is a limited amount of literature that delves more deeply into children's time spent in their neighbourhoods and a lack of deeper exploration into the remaining trips on foot that children do take part in. The literature that does consider children's broader use of their neighbourhoods often sits under the remit of 'activity spaces', where a focus is usually on distance travelled rather than the quality of the time spent in a space. There is also a strong focus in the literature on children's independent mobility, but limited questioning of the continued relevance of this measure and limited discussion on the relevance of considering children's autonomy over their independence. It is suggested that there is a need to reconceptualise children's neighbourhood journeys to be more than just about travelling to school independently, or about how far they are allowed to go.

This study will contribute to these gaps in the literature by providing a more in-depth understanding of how children move around their neighbourhoods and the aspects of

this that are important to them. There is a need to better understand children's broader mobility in their neighbourhoods and the quality of the time they spend within them, rather than just the quantity of time or distance. The relevance of both independence and autonomy as measures of children's mobility will also be considered within this study with the aim of understanding what is most important to children.

CHAPTER 3: Children's Well-Being and Experiences of Place

Much of the research on children's mobility and use of their neighbourhoods is based upon creating better conditions for the child and exploring how their well-being and positive development can be improved (Shaw et al, 2015; Tranter and Pawson, 2001; Mackett et al, 2007). There is a broad range of evidence to support the benefits to children of their neighbourhood mobility and their autonomy and independence, though there is some inconsistency in how these are defined and how they are measured. Some studies choose only to look at independence and autonomy, others choose to look at movement and mobility and some choose to look at different factors simultaneously. There are, nonetheless, benefits to children's health and well-being that have been repeatedly demonstrated in various studies and that appear to be influenced by either children's independence, mobility or both.

Well-being is a complex topic with a variety of definitions and viewpoints, but incorporates physical, social and emotional factors (Pollard and Lee, 2003; Ryff, 2014; Ben-Arieh and Frønes. 2011). In the UK, there are high levels of health related child vulnerabilities leading Horton (2018, 106) to describe the UK as "facing nothing less than a national emergency regarding the health of its children and young people." In Shaw et al's (2015) report on children's independent mobility, they note a possible link between child well-being and independent mobility, highlighting a correlation between the countries they surveyed for independent mobility and their UNICEF well-being rankings. These rankings incorporate children's mental well-being, physical well-being and skills for life, which incorporate basic academic and social skills. UNICEF (2020) highlight the importance of a multi-level approach to well-being, which demonstrates the importance of considering how children interact with their environment and how this influences their development. This links to the work of environmental psychologists such as Muchow (Mey and Günther, 2015), Hart (1979) and Moore (1986), as well as the concept of socio-ecological models

(Bronfenbrenner, 1977). In the UNICEF well-being ranks, the UK is ranked just 27th out of the 38 high income countries chosen (UNICEF, 2020).

Children's Mental Well-Being

Social and emotional well-being factors tend to be combined under the framing of mental well-being. Children's mental well-being levels in England have posed concern in the past, as it has become apparent that the country is doing less well than other countries on this measure (Rees et al, 2010). The Covid-19 pandemic has also accelerated concerns around children's mental well-being and the negative impacts that the pandemic has had on children (Snape and Viner, 2020).

There are various ways of measuring a child's mental well-being and even those that try to measure well-being in quantitative ways rely on subjective indicators.

Advocates of this approach, such as Csikszentmihalyi (2014), argue that subjective measures of well-being are more reliable than those that can be more objectively assessed. The topic of subjective well-being has been explored in depth within the field of psychology. It is now widely accepted that there are two elements to subjective well-being: hedonic and eudaemonic (Samman, 2007; Rees et al, 2010). Hedonic well-being refers to subjective happiness in the moment (Ryan and Deci, 2001; Kahneman, Diener and Schwarz, 1999). Eudaemonic well-being relates to higher level aspects of well-being, based on the principle that happiness alone is not a sufficient measure (Ryan and Deci, 2001). This type of well-being is harder to measure and relates more to understanding and exploring children's experiences (Fattore, Mason and Watson, 2016).

Studies relating to subjective well-being and eudaemonic well-being specifically, highlight a number of important constructs within the concepts and it is argued that these also relate to a person's, or child's in this instance, relationship to place. Ryff (1989) developed a model of six constructs representing, what is now known as, eudaemonic well-being: autonomy, personal growth, self-acceptance, life purpose, environmental mastery and positive relationships (see figure 3.1). Although not the only way to measure eudaemonic well-being, Ryff (2014) notes that there are now many studies which support the construct and it is well regarded.

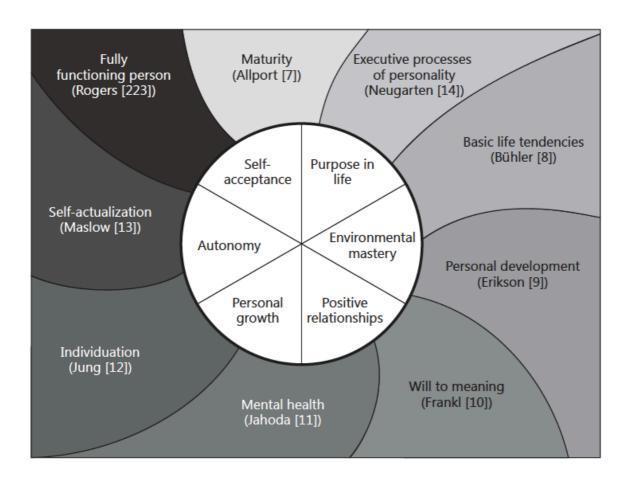


Figure 3.1: Core dimensions of psychological well-being and their theoretical foundations From Rvff (2014, 11)

In Ryan and Deci's (2020) Self Determination Theory (SDT), they also highlight the importance of the three basic psychological needs of autonomy, competence (and feelings of mastery) and relatedness. When any of these needs are not met, they state that it can be damaging for motivation and well-being. Similar themes have also been found in a national survey of children's well-being in the UK. The Good Childhood Inquiry (Layard and Dunn, 2009) found that relationships with others, safety and freedom were the most important to children and young people. Although not all of the aspects of well-being identified by Ryff relate strongly to children's experiences of place, those three that overlap with SDT do: autonomy, competence and relatedness. **Autonomy** refers to having a sense of control, initiative and ownership in your actions (Ryan and Deci, 2020). This links to children being able to feel in control over their actions and movement in their neighbourhoods, whether this is independently or not. **Competence** refers to developing mastery over tasks that

are important and being able to effectively deal with the environment (Ryan and Deci, 2020). This links to learning how to navigate the neighbourhood and develop the skills to get around and use spaces competently. **Relatedness** refers to having a sense of belonging and connectedness with others (Ryan and Deci, 2020). This links to community cohesion and developing social ties with others through neighbourhood experiences. In spite of this evident connection, there are few studies that link children's psychological and social well-being to their neighbourhood mobility and travel behaviour (Babb et al, 2017).

Constructs of subjective well-being are not fixed and there are strong social and cultural influences that can impact upon these. Solomon (1993) highlights how perspectives on well-being can change over time, and argues that some of the reasons for an increase in parental escorting of children, for example, could be attributed to changes in perception of what is *best* for children. This further emphasises the relevance of considering well-being, not only to understand the impact of experience on children, but also to help to understand *why* certain behaviours pervade.

This way of focussing on mental well-being when considering children's mobility has a number of benefits. It encourages a consideration not only of the child's actions, but also how they feel about their actions and their movements, and the meanings of these. It can begin to uncover additional depth in terms of the meanings of autonomy and independence, safety and the interaction of the built and natural environment into children's lives.

Linking Mental Well-Being to Children's Mobility

Understandings around children's well-being support the notion that children being able to move around their environment will have an impact on it. This is backed up by a small number of studies that link well-being to children's travel behaviours (Ramanathan et al, 2014; Westman et al, 2013; Stark et al, 2018) and their broader neighbourhood mobility (Babb et al, 2017), although as Stark et al (2018) note,

"benefits of active travel modes for psychological and social well-being are assumed, but empirical studies measuring these effects for children are still scarce." (454)

Opree et al (2018) also highlight that most research on child well-being has asked adults what they think children think, rather than asking children, which can easily give different results (Sixsmith et al, 2007)

How children feel when they are moving is of importance not only for their well-being and for understanding its meaning to them and their emotional connection (Murray and Mand, 2013). This is shown clearly in Fattore et al's (2016) study of child well-being, which takes a strong child-centred approach to it and uses a qualitative methodology to be able to develop an understanding of the interaction between different elements. Waygood et al (2017) also published an integrative review of transport and child well-being, showing that walking and active, independent travel have the most positive effects on children's well-being with the most negative effects on it being associated with traffic. In another study on children's experiences of active travel, it was found that parents and children who travelled actively reported more positive emotions than those that travelled passively (Ramanathan et al., 2014). Westman et al (2017) also found that the children in engaged in conversation during their journeys reported it being of higher quality than those that engaged in solitary activities.

There is also evidence to show the specific social benefits of children's neighbourhood mobility with regard to their well-being. The development of social capital has been shown to be beneficial for children's health, particularly mental well-being (Ferguson, 2006; Drukker et al, 2003; Waterston et al, 2004) and is linked to children's neighbourhood mobility. Studies have shown that, in the absence of children outside in the neighbourhood, social cohesion and sense of place is reduced (Weller and Bruegel, 2009; Ross, 2007; Spilsbury, 2005). Ross (2007) found the importance of a child's walk to school in developing community relations, which in turn was important for maintaining their safety. In particular, Ross highlights

weak ties and those fleeting and brief exchanges between community members as generating feelings of belonging, security and social support for children. Weller and Bruegel (2009) found that those parents that were active in their local area were more likely to grant their children autonomy and that those children with parents who were not fearful of the external environment had more friends. They found that children were often enablers of the development of social capital, defining social capital as developing through social interactions and as a resource that develops through social networks.

Karsten (2005) explored how children build up their own social networks and the influence of their school and their neighbourhood upon this. She notes that since school selection has been allowed in the Netherlands, children have instead used the street to get to know people from different backgrounds in their neighbourhood. Those children who played outside on the street more were better at bridging social differences. Similarly, Prezza et al (2001) found that children with higher levels of independence had higher levels of activity and sociability. Lack of adult supervision can also facilitate greater social interaction (Simpson, 1997). Some state that children have begun to lose a social identity through the reductions that have been seen in their mobility and participation in public life (Lolichen et al, 2006; Christensen and O'Brien, 2003; Matthews, 2003; Zeiher, 2003).

Others have cited the benefits of children's mobility in enabling them to develop confidence and skill navigating through and understanding their environment (Mackett et al, 2007; Carver et al, 2008; Rissotto and Tonucci, 2002; Ahmadi and Taniguchi, 2007; Rissotto and Giuliani, 2006) and developing an increased appreciation of the environment in which they live (Rivkin, 1995). Individuality and social competency can be developed through allowing children autonomy to experience spaces on their own, particularly the local spaces between home and other settings (Mitchell et al, 2007). Independent access has also been shown to be important for allowing children to develop personally, intellectually and psychologically and to get to know their own neighbourhood (Tranter and Pawson,

2001). Positive benefits on children's emotions have also been shown for those children who travel actively to school (Ramanathan et al, 2014).

Having already noted the potential for playfulness within everyday movement for children, it seems evident that when a child is more mobile, they will have more opportunity for play. Indeed, it could be argued that their mobility is their play. Play has perhaps some of the clearest evidence to demonstrate its benefits. Play contributes to the cognitive, physical, social and emotional well-being of children (Ginsburg, 2007) and has been recognised by the United Nations as a right for every child (UNICEF, 1990). When exploring the benefits of play in more detail, it shares many of the cited benefits of child mobility, particularly social competence (Pellegrini and Smith, 1998).

Children's Physical Well-Being

A child's experience of a place can also influence their physical well-being. Physical inactivity is a major risk factor for mortality (WHO, 2020) and a 55% of children in England do not meet the minimum guidelines for physical activity of 60 minutes of moderate activity per day (Sport England, 2021). Those activities that tend to take place as part of a child's neighbourhood mobility, such as walking to and from school or active neighbourhood play, can contribute to their overall levels of physical activity. Physical activity and levels of children's mobility are also often linked to growing levels of childhood obesity (Mackett, 2004; Stone et al, 2014; Jago, 2017; Floyd et al, 2011), though the evidence on this specific relationship is less certain.

Evidence on the impact of children's neighbourhood mobility on physical activity levels is mixed and suggests a complex relationship. In terms of children's active travel, it is evident that if a child walks or cycles to get somewhere instead of getting in the car or taking the bus, they are going to expend more energy. It is also worth noting that the physical benefits of these mode choices are likely to be similar, whether or not they take the trip independently. Although active travel on the walk to school has decreased (O'Brien et al, 2000), this often only forms a small part of a child's overall energy expenditure (Sturm, 2005). Sturm (2005), in fact, suggests that in the USA, when looking at total active travel time, minutes of walking have gone up for children due to the additional number of trips that they are now taking. With regard to children's play, Beunderman (2010) notes some of the intrinsic benefits of play, particularly when independent, including the fact that activity patterns are set early in life, it generates increased physical activity levels, often provides access to natural environments and helps children to understand how to explore their environment on their own. Brussoni et al (2015) conducted a systematic review to explore the relationship between risky outdoor play and children's health and found increases in both habitual and acute physical activity, and increased social confidence.

Yet there is also a complexity to some of the physical activity benefits of children's neighbourhood mobility. When a child is allowed out in their neighbourhood to move around or play, they are automatically *not* doing something else. There is a tendency to blame increasingly scheduled childhoods and an increase in organised, extracurricular activities for the reduction in independent play and physical activity and there is some evidence to support this, but this in part depends on what the alternative for children is. Mackett et al (2004) and Stone et al (2014) found that children who were given independence to explore and walk around their local environment did use more calories or were more active throughout the week, but the variable of whether or not they also attended organised clubs was not incorporated. Indeed, often one of the reasons for walking was to attend an organised club. Schoeppe et al (2014) also demonstrated that frequent outdoor play was associated with an accumulation of physical activity and higher levels of activity than those that did not play outdoors, but also did not consider how attendance at organised clubs might impact upon this.

Holloway and Pimlott-Wilson (2018) raise the argument that there is a need to be careful when talking about the over-scheduling of children, suggesting that the greater concern should be over those children who are under-scheduled, and who do not take part in either organised clubs or outdoor play. This is backed up by evidence from Jago (2017), who found that both organised clubs and playing in the neighbourhood showed increases in physical activity levels compared to those who stayed at home.

Understanding more subjectively how active a child is and how they get around in their daily lives may be more relevant than focusing on objectively measuring their physical activity levels, in terms of understanding how this relates to how a child experiences of a place. This relates closely to understanding a child's mobility and how they use their neighbourhoods (Marzi and Reimers, 2018). Although children's active mobility in itself does not guarantee higher levels of physical activity, the movement in itself is unquestionably active. However, it also links to other aspects of

children's lives, such as time spent in organised clubs or other forms of physical activity that might be done away from the neighbourhood space.

Conclusion

Most research on children's mobility and use of their neighbourhoods is driven by the aim of creating better conditions for the child and exploring how their well-being and positive development can be improved (Shaw et al, 2015; Tranter and Pawson, 2001; Mackett, et al, 2007). However, if often tends to focus on particular elements of children's mobility, such as examining whether a child's travel involves physical activity or the presence of a supervising adult, rather than the effect that this form of mobility has on the child as a whole. That is not to say that this evidence is not valid in its own right, but it is felt there is also a need to examine the broader picture of children's mobility in order to understand the impacts on a child's well-being in a more holistic way.

Although there is a reasonable understanding of the overall benefits to children of their neighbourhood mobility, there is a poorer knowledge of the specific link to children's mental well-being. Theories on psychological well-being in particular, suggest that there could be an important link to be made between this and children's levels of neighbourhood mobility. Although this study's main focus is not on well-being, it has been incorporated as an important factor to consider, particularly given the study's focus on the children's subjective experiences over and above any more quantitative measures of their behaviour. It will start to fill this gap in the literature by providing some suggestions where links between neighbourhood mobility and well-being might be.

The link between children's neighbourhood mobility and physical activity is also relatively poorly understood. By drawing on theories of complexity and CAS, this study will also try to better understand the influence that differing levels of neighbourhood mobility have on their physical activity levels and the relevance of this in understanding children's experiences.

CHAPTER 4: Context Setting

This chapter discusses the various levels of influence that impact on children's mobility, and considers also what has changed over time. It starts to link children's mobility to ideas around socio-ecological models, based on the premise that, in order to fully understand it, it is important to assess how the range of factors involved are linked to each other. Veitch et al (2017) note the importance of considering these other factors, how they relate to the physical environment and, in turn, how they impact on children's mobility. As Valentine and McKendrick (1997) found, the evidence to them was clear that the major factor affecting children's outdoor movement and play was not "the level of public provision to play facilities but parental anxieties about children's safety and the changing nature of childhood." (219)

The chapter works through the layers of influence that were previously set out in chapter 1 (figure 1.1). It begins with the influence of the natural environment, using this as a start point for considering how children's mobility develops. It then moves on to considering the societal influences on children's mobility, which is also something relevant within all of the layers to some degree. This section specifically discusses the background to the concept of childhood itself and considers its historical context. It then covers some of the political influences on children's lives in the UK, particularly in relation to urban planning.

At the neighbourhood level, the chapter then considers the specific elements of the built environment that can influence children's mobility, before considering the influence of the community and the child's school. It then moves on to the influence of a child's family and the home, before finally considering the influence of the individual features of the child themselves.

The Natural Environment

"Is the outdoor child an endangered species?" (Carver et al. 2008, 217)

At the heart of any neighbourhood, is the natural environment and nature. It may be more prominent in some places than others, but it is something that is always there and should not be forgotten. It was there before places emerged and will be there when they are gone. Nature is both those natural elements that can be seen within a place, as well as what happens and changes on a daily basis, linking to the seasons and the weather. In the UK and London context, there are four seasons with the summer, from June to August, being the warmest and driest and the winter, from December to February, being the coldest (Met Office, 2020). The number of daylight hours also vary a lot between summer and winter, with 17 hours of sunlight during the summer solstice in June and just under 8 hours of daylight during the winter solstice in December (Met Office, 2020).

Children's access to nature in the UK and other countries has been declining. In 1976, a study by Newson and Newson (2017) explored mothers' views around parenting and found that 60% of mothers thought that their children could be described as 'outdoor' children. By 1997, this had reduced to 23% (Valentine and McKendrick, 1997). A study by Natural England (England Marketing, 2009) clearly shows a decline in children's access and preference for nature, with only 10% of play happening in natural spaces. It highlights some of the other factors that have also influenced this reduction, such as a declining tolerance of children's nature-based activities, exemplified by 'keep off the grass' signs, and a loss of access to natural spaces due to either a reduction in spaces or restricted access. All of these factors are notable of a cultural shift in attitudes towards the outdoors and nature. Even in Norway, a country where recreation in natural surroundings is heavily promoted, there has been a reduction in children's access to nature and children's use of natural areas has changed from being spontaneous and self-initiated to being planned, organised and adult-initiated (Skår and Krogh, 2009).

Hart (1979) calls the environment used and experienced by children the 'phenomenal landscape.' To children, the outdoors should be an explorable public domain where they can engage in wider cultural and natural systems. Proshansky and Fabian (1987) discuss how a child's opportunity and ability to *read* an environment can also help with the development of concepts of place identity and their sense of control of the physical world. In Kreutz's (2015) study of the Australian indigenous community, she found that as children frequented natural areas over time, they developed place attachments. Children also place particular value on their own self-constructed places and spaces where they can make a world of their own and discover a place for themselves (Sobel, 1993; Kirkby, 1989). When asked about their memories of childhood, many people refer to outdoor places (Titman, 1994). Chawla (1986) found that outdoor places evoked memories as they tended to be places that engendered a sense of belonging and attachment. The semiotics of the place was somehow enhanced by it being outdoors, perhaps because of the increased sensory attachment that people can have towards nature.

In the 1970s and 1980s, when Roger Hart (1979) and Robin Moore (1986) produced their seminal research on children's environments, they did not set out to explicitly focus on nature (Chawla, 2015). Yet, the open-ended structure of the research meant that they uncovered the strong value of natural areas for the children of that time. Hart (1979), for example, found that children's favourite places tended to be mostly within nature, such as rivers, woods, fields, hills, sliding places and climbing trees (see figure 4.1). Play equipment came a mere tenth in the list, streets even further down. Some similarly open-ended studies in more recent years have also touched upon children's relationship with nature. Ross's (2007) study of children's journey's to school in Scotland, demonstrates this particular group's close relationship to nature and explores their trips in all weathers throughout the year. It could be argued that there is less focus on children's relationship with the outdoors and nature in recent studies, simply because these relationships no longer exist in the way that Hart and Moore discovered them.

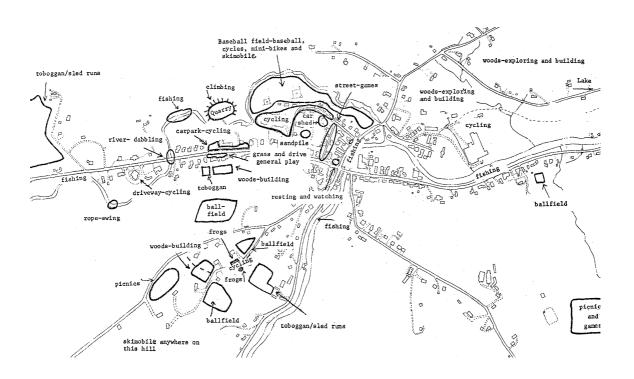


Figure 4.1: Summary of land use - places shared by the children of three or more families unaccompanied by adults (Hart, 1979)

There are many unique benefits of children being able to access the outdoors and nature, in terms of their cognitive, physical, emotional and social development. Many studies have shown the positive benefits that access and exposure to nature can have on people's mental outlook and well-being (Kaplan and Kaplan, 1989; Wells and Evans, 2003; Söderström et al, 2013; Markevych et al, 2014; Kyttä et al, 2012). Chawla (2015) summarises the many studies that highlight how natural environments have a positive influence on children's health and well-being specifically. With regard to the broader category of outdoor space, there is a generally positive relationship between being outdoors and health, particularly for children (Munoz, 2009). Being outdoors can also be one of the most consistent predictors of children's physical activity levels (Tucker and Gilliland, 2007; Veitch et al, 2017; Baranowski et al, 1993; Wheeler et al, 2010; Coombes, van Sluijs and Jones, 2013).

Changing Nature

As the natural environment changes throughout the year, it offers different affordances to children within each season. The weather may change, as may the light, and seasonal changes such as leaves on trees and flowers will also change over time. This constant state of flux can be beneficial for children in getting used to being in an uncontrolled setting. It can provide an opportunity to enhance children's experiences, but can also restrict children's movement if these natural changes are perceived negatively or are not well understood. Freeman and Tranter (2011) discuss how, as children's access to their outdoor environments reduces, they are less likely to experience these changes in their environment. They are more likely to see it as static, rather than in a process of natural change. Added to this, the increased restrictions on children's movements and the increased control and regulation of these, means that they are often unable to realise the potential benefits that the natural environment offers them in terms of its change over time. Hart (1979) notes the importance of understanding how children engage with places in different ways, and how this changes at different times, suggesting that consciousness is never static.

Valentine (2004) notes how children are granted more freedom in the UK in the summer months when daylight hours are longer. Both the darkness and colder, wetter weather conditions are seen to be a factor in restricting children's movements in the winter months. Yet there is limited recent research exploring how children's mobility changes throughout the year and the impact of the seasons. Tucker and Gilliland (2007) reviewed research on the effect of the seasons and weather children's physical activity levels and found that most of the research was conducted in the warmer months of the year with explicit consideration of seasonality and weather conditions tending to be absent. When these factors are mentioned, they are often viewed as barriers to movement and not explored any further. Ergler, Kearns and Witten (2016) specifically studied children's seasonal play in New Zealand, and found that many children retreated indoors in the winter months. However, they note that an explicit consideration of either seasonality or the weather

conditions tend to be absent in studies of children's use of the outdoors. As well as considering children's broader relationship with nature, understanding how children use their neighbourhoods at different times of the year can help to better understand what influence the natural environment has on their neighbourhood mobility and how to support this throughout the year.

It is also important to note the social and cultural influences that affect perceptions of nature and different climates. Studies have found differences in children's behaviours outdoors in summer and winter, but the way in which these differences occur are not consistent across different countries and locations (Ross and Gilbert, 1987; Sener and Bhat, 2007; Baranowski et al, 1993; Brodersen et al, 2005; Fyhri and Hjorthol, 2009). The impact on children's behaviour of levels of darkness and changing light levels also suggest cultural influences. Shaw et al (2015) found large variations by country of children allowed out after dark. In Sri Lanka, for example, a country with minimal annual variation in daylight hours, they found that virtually no children were allowed out after dark. In comparison, in the Scandinavian countries of Denmark and Sweden, over 30% of children were allowed out after dark, rising to over 80% in Finland. There are likely to be many cultural factors leading to these differences, including higher levels of darkness during the day and differing perceptions of the risks. In the UK, the number of children that they found to be allowed out after dark was low at around 10%.

The natural environment is clearly an important influence on children's neighbourhood mobility, but the discussion has also highlighted how it is linked to other factors and that the relationship between these also needs to be considered. The next section will now discuss more broadly the relevance of social, cultural and political influences, the impact of which is certainly not constrained to that of the natural environment.

The Social, Cultural and Political Environment

This section introduces the various social, cultural and political factors that may impact on children's behaviours and how children are perceived in the public realm. It draws on the historical context in order to be able to better comprehend how the present situation has come to be, beginning with an exploration of the concepts of childhood itself.

Concepts of Childhood

"The immaturity of children is a biological fact but the ways in which that immaturity is understood and made meaningful is a fact of culture." (Prout and James 1997, 7)

Valentine and McKendrick (1997) suggest that it is necessary to have a historical understanding of both childhood and parenting to attempt to unravel some of the complex social and cultural factors that are underlying in every family and that are ultimately affecting what children do and how they behave in the present. There is sometimes a tendency when looking back at the past to take an idealised view of it and to think that childhood was better for children then, as a number of other studies have discussed (Karsten, 2005; Lareau, 2011; Horton and Kraftl, 2017). However, having an understanding of what has gone in the past and comparing this to the context of the present time can also help to better develop a response to any questions raised.

Much of the research around childhood in the past 20 years or so has framed childhood as a social construct (James, Jenks and Prout, 1998; Mayall, 2002; Qvortrup, 1994), something that is now considered normal in the twenty-first century, but that has not always existed within the notion of society. Katz (2002) states, for example, that there is nothing natural about childhood and being a child. It is clear that the biological factors that are unique to being a child should not be forgotten, but

it is also considered important to look at the societal influences on the concept. Jenks (2005) considers the contrasting ways in which children are considered in society, terming these views the Dionysian and Apollonian narratives of children. These exemplify the social and cultural influence on how children are viewed, with the Dionysian view being that children are like a devil, unruly, wild and inheritors of the original sin, whereas the Apollonian view was that children were inherently innocent and with innate goodness. Although the Dionysian view can be more easily associated with a past time, Jenks does not set out to label or time stamp certain attitudes but rather to highlight that different attitudes and views can exist, even within the same time period. As views on what childhood is and what children are have changed, so have parents' and adults behaviours towards them. The current definition of childhood is one that is very separate to the adult world, defined by adults but also limited by them (Valentine, 2004). Lareau (2011) suggests that the majority view of society now is of a universal childhood, where all children must be happy and free, with no responsibility. As Holt (1974) suggests, children have always been owned and controlled by adults, but the difference now is that they are also more cut off from the real adult world than in the past (Holloway and Valentine, 2000).

Cowman (2017) explored the history of children's street play, finding that although children were seen on the street before the 1920s, it appears to be that it was in this period, and with the advent of the car, that the idea of children playing on the street started to be seen as important. Before the 1920s, children were required to work, either to help their parents or to take part in informal paid labour (Lareau, 2011; Gillespie, 2013). Although they may have played out on the street, this was often because there was not enough space indoors to spend time. It is only since the 1920s, as children's economic contributions have reduced, that they have become more valued in personal and emotional terms, and they have also had more free time and more time for play. When Karsten (2005) spoke to adults who had grown up in the 1950s, they still talked about being watched whilst playing on the street and were often there out of necessity rather than choice, due to small homes and having limited other options. Both Cowman (2017) and Valentine (2004) note that there was

an increase in street play in the late 1950s and early 1960s and it then reduced again in the 1980s.

In recent times, children have been spending increasing amounts of time in places and spaces organised, controlled and watched by adults, including schools, preschools and after-school clubs, and this has led to the concept of the institutionalisation of childhood (Edwards, 2002; Qvortrup et al, 1994). The increased institutionalisation of childhood and the factors that have led to it or derived from it may have led to a loss of free and independent time for children (Rasmussen, 2004; James, Jenks and Prout, 1998; Zeiher, 2003). Yet it is also important to understand the context within which it has come about, as well as what this really means to children themselves (Karsten, 2005).

Considering how these behavioural shifts occur within their social and cultural context raises the question of how significant they are to children. Whether it is broader concepts of childhood or the institutionalisation of childhood, these societal factors clearly play a role in shaping children's lives. They help to reinforce the importance of considering the child's perspective, so that a better understanding can be gained as to how these changes impact upon them and how important they are.

Political Influences

The background context of policy and social norms can influence children's and parents' behaviours. What is considered best for children and families can also be deeply politically driven (Gillies, Edwards and Horsley, 2017). At the neighbourhood level, politics shape the policies that lead to the design of a neighbourhood, particularly with regard to urban planning and transport policies. Both these policies and broader politics around children's place in society will also influence how children and their parents view that same neighbourhood, how they use it and move around in it.

Current policy and legislation in England tends to facilitate the control of children in urban spaces rather than allowing them to participate actively in places or enjoy the benefits on the same footing as adults. This takes its roots from a long history of children's rights largely being ignored (Wood, Bornat and Bicquelet-Lock, 2019). This review will focus on the England context, zooming into London, as this is the focus of the study, but this is by no means an issue in England alone. Cele and van Der Burgt (2015), for example, discuss the Swedish context, noting that in planning and transport policy children are rarely explicitly focused on in spite of Sweden being a country that tends to see higher than average levels of children's independent mobility (Shaw et al, 2015). This is all against the backdrop of the United Nations Convention on the Rights of the Child (UN CRC), a key international policy that is said to be one of the most complete statements of children's rights ever produced. The UN CRC highlights the importance of children's rights (UNICEF, 1990). Although ratified in the UK in 1991, being an international convention, it is not necessarily reflective of the England's social, cultural or political standpoint on children in society, as will be discussed.

It is argued that the UN CRC has had limited impact in England with regard to children's use of public space. Children's movement in public places and spaces is often restricted and there are many signs and signals that they are not welcome. 'No Ball Games' signs, for example, are a common feature around the UK (Gill, 2007). Interventions will often be designed into public spaces to prevent skateboarding by young people. Public Space Protection Orders were introduced in the UK in 2014 and allow for broad powers to criminalise unwanted behaviours in public spaces that would not otherwise be criminal. These have been known to restrict young peoples' presence or activity in certain areas (Appleton, 2015). Prior to this, the 1998 Crime and Disorder Act, enabled local authorities to put in place local street curfews for children aged under ten (Matthews, Limb and Taylor, 1999). There is a range of evidence to suggest that, even if adults are willing to tolerate the presence of some children in public places, they rarely appear to welcome it (Cahill, 1990; Collins and Kearns, 2001). Children, and especially children without an adult with them, are simply not a commonly accepted or considered part of the public realm in the UK.

The 'culture of fear' (Furedi, 2006) has also been blamed for fuelling this perception that children and young people hanging around in public space are a problem (Gill, 2007). When it comes to urban planning and planning policies in England as well, children tend to be forgotten. As Wood, Bornat and Bicquelet-Lock (2019, ii) state "a quick examination of national planning policies reveals children are currently most visible through their absence."

The main focus on children in policy in the UK relating to the built environment is on children's service provision. For a number of years now in England, children's needs appear to have only been addressed in policy terms through the provision of schools and children's centres. Looking back in recent history, the renaming of the department of Children, Schools and Families to the Department for Education in 2010 (Voce, 2015) was more than just semantics and begins to highlight how the governments at the time viewed children. This approach is also now reflected in the way that local authorities are structured in both national and local planning policy. In the National Planning Policy Framework (NPPF) (Ministry of Housing, Communities and Local Government, 2021), the national planning policy for England, the only mention of children is in relation to families with children and children's play is only mentioned once (Wood, Bornat and Bicquelet-Lock, 2019). This position is reflected in many more local planning policies, where the only mention of children's needs tends to be around school or childcare provision. Outside of planning, a strong focus on wraparound care in recent UK government policy, where childcare is provided for school aged children both before and after school, exemplifies this focus on service provision. Policy on wraparound care significantly increased the number of out of school clubs available to children (Smith and Barker, 2000) putting out a message that children should be in some sort of organised care in order to get the best outcomes (Department for Education, 2016). As Gill (2008, 138) notes, such a service-oriented response is limited and takes a "pessimistic view of children's ability to shape their lives, seeing their well-being largely dependent upon adult support and interventions." It shows a limited interest in how the wider place is designed for children's needs, how children can get around, the impact of the street networks or what Gill (2008) terms a "space-oriented approach."

This focus on the provision of services within urban planning, rather than considering how children more broadly use space, has further been compounded by an emphasis on segregating the spaces that children use. Playgrounds have a long history of segregation, having originally been provided to keep children off the streets and away from certain physical and moral dangers (Gagen, 2000). This focus largely continues to the present day, as shown in the UK's Secured by Design police security initiative (Secured by Design, 2021). This is based on the idea that the way to address crime is to control behaviour and it reflects a focus on segregation. It suggests that playgrounds should be fenced off and that young people should be segregated away from homes and other people so as to avoid becoming a nuisance (Wood, Bornat and Bicquelet-Lock, 2019), suggesting that this will make a place safer. It is argued, however, that rather than meeting its objective it simply reinforces the premise that children and young people's presence in public space is not welcomed. As Gillespie (2013) notes, these are not necessarily new challenges. She discusses how, in New York, there was a focused policy shift in the early twentieth century to get children off the streets and a search for ways to organise their time outside of school hours. Gillespie suggests that this is what led to segregation and adult supervision for children becoming the norm.

This position on children in public space is also evident when it comes to transport and mobility. Policies such as the Road Traffic Regulation Act from 1967 were primarily focussed on the fast movement of vehicular traffic. Coinciding with a rise in vehicles on the road, road traffic accidents for children rose dramatically in the 1960s, 70s and 80s, with maternal preoccupation and a lack of play facilities cited as reasons for this growth (Cowman, 2017) rather than a consideration of whether the design of the street or road was suitable. The UK government response to this was to put out campaigns such as 'One False Move and You're Dead' to increase fear of the roads and keep people away from them (figure 4.2).



Figure 4.2: Campaign poster from Ministry of Transport (1982; cited in Hillman et al, 1990)

Similarly in the 1940s, the campaign 'kerb HALT; eyes right, eyes left - then if the road is clear, quick march' also implied that motor vehicles took priority over people (Thomson, 2013). With both of these campaigns being followed by announcements that the UK roads were now safer than ever (Thomson, 2013; Hillman et al, 1990), they put out a message that people, and children, should avoid danger on the roads in order to stay safe. This can be extrapolated to suggest that children, who are already more vulnerable on the roads, were again not welcome in public space.

There have been some positive political shifts in urban planning and transport policies in England and particularly in London in recent years. There has been an increased focus on children in urban planning and on people as users of the street

and public space, shifting away from the previous rhetoric of vehicles and the car. Recent Mayors of London have shown an interest in taking a more holistic approach to how children use space. This began in 2008, when Mayor Ken Livingstone published planning guidance on Children's Play and Informal recreation (Voce, 2015). Although this was still strongly focussed on children's play facilities rather than children's broader use of public space, it demonstrated a political interest in the area. Since then, the new London Plan under current Mayor Sadiq Khan more clearly defines play and children's mobility and puts more of an emphasis on how children use space (Greater London Authority, 2021). This has also led to the publication of 'Making London Child-Friendly' in 2020 (Greater London Authority, 2020), a document that presents a strong case for putting children's needs higher up the agenda when it comes to urban planning. Similarly in the London Borough of Hackney, where this study is located, the Mayor has recently adopted the 'Child-Friendly Places Supplementary Planning Document' (Hackney Council, 2021). The infancy of these initiatives however, means that it is too early to evaluate their success or to see if they can have a lasting impact on how children are viewed in society, both in London and across the UK as a whole (Wood, 2015; Wood, Bornat and Bicquelet-Lock, 2019).

In relation to transport and travel, in 2018 the current Mayor of London Sadiq Khan published his Transport Strategy (Greater London Authority, 2018), which the Healthy Streets Approach was at the heart of, placing an increased emphasis on streets for people. In many ways, this provides support for the types of mobility that are important to children, by prioritising walking and cycling over cars. Yet although there is mention of them in the evidence for the policy approach, it is notable that there is no explicit reference to children within the guidance. Although this approach is a positive shift for active travel, there is still a sense that its focus is on streets for travel and getting around and less weight seems to be placed on those other uses of the street for meandering, socialising and play, which are known to be of particular importance for children. As Brömmelstroet et al (2017) note, embedded within transport planning is still the fact that mobility is about getting from one place to another and the most efficient way of doing that. The Healthy Streets Approach

represents a shift towards thinking of streets as having both a movement and place function (Plowden, 2020) but it is still felt that it could go further to fully represent how children use these spaces.

This political scene-setting is important in understanding how children are viewed in society and the ways in which they are influenced. The way public policy is framed can highlight who is seen to have a right to the city and national policies will often shape the everyday urban politics (Middleton, 2016). Particularly in relation to considerations of the built environment, policies are highly influential in determining the design of places and spaces. With regard to children, there is still a lack of consideration and understanding in policymakers in England of children's holistic needs or how they use space. This is exemplified in more recent political interventions in England in relation to the Covid-19 pandemic. Within the first lockdown in England, the population were allowed to take part in daily exercise, but all playgrounds and spaces where children might usually do this exercise were required to close (UK Government, 2020a). During the third lockdown in England in 2021, playgrounds were kept open but with a rule in place stating children could only take part in their daily exercise with one other person, meaning that for those children who were not allowed outside unaccompanied, they could not play with a friend without breaking the rules (Elgot, 2021). This is an another example of children's needs being either forgotten or dismissed and shows how policies can directly impact on behaviour and, ultimately, well-being outcomes for children.

The Neighbourhood, Community and School

"I don't want a Childhood City. I want a place where children live in the same world as I do." (Ward 1978, 179)

The neighbourhood environment perhaps has the most direct impact on children's neighbourhood mobility. It is the space that the child spends most of their time and where both the physical elements of the space and the subjective perception of the space come together to influence behaviour. It is in the child's neighbourhood, and what they do in it, that it starts to become evident as to how the levels of influence relate to each other and come together to impact on what a child does.

In this section, the influence of the design of the neighbourhood and the built environment will firstly be considered, before then discussing the influence of the community and the child's school

The Design of Children's Neighbourhoods

The research around the impact of the built environment on children's mobility tends to be split into two themes. Active travel appears to be the most researched area of children's mobility, though most of the research is focused on travel to school, with only a select few studies exploring travel to other destinations. This element of children's mobility is important, but is not the only reason for children to be mobile in their neighbourhood. There is also some research on how children move around their neighbourhoods both for play and interaction and how the built environment impacts upon these behaviours. This is the element of children's mobility that tends to be of more importance to children than adults, due to their reduced range (Department for Transport, 2017a). As Carroll et al (2015, 417) state "while the neighbourhood may well be a mere 'backdrop' for many full-time employed and commuting adults, for children it is more likely to profoundly influence the geographies of everyday life."

Both of the themes of active travel and of play and interaction relate to the public spaces in a neighbourhood. A useful framework for considering these is that of third places and this is the framework that will be used to structure this section. In addition to the primary (home) and secondary destinations (work/school), third places are of particular importance to children (Carroll et al, 2015). The term was originally defined by Oldenburg (2001), who identified third places as key sites of informal public life, located on neutral ground and accessible to all. They can help to establish a sense of place and belonging and have been shown to be the anchors of community life. Although third places are sometimes seen solely as the destinations outside of the home and work, they can be further categorised into threshold places such as driveways and courtyards, transitory spaces such as streets, and destination spaces such as parks and cafes (Carroll et al, 2015; Gardner, 2011). This framework fits with Nordström's (2010) findings that, when asked about what makes a good neighbourhood, the majority of children will state that it has places to meet and play with friends, as well as the ability to move safely around. Other studies show similar findings. In Cooper Marcus and Sarkissian's book (1988), their review of postoccupancy evaluation studies identified over 100 qualities of what make a good development for children, including street linkages and access to a wider environment, safe outdoor play space, private open space that links to communal open space and the general importance of spaces between buildings. These reflect that moving in order to interact with others, build social connections and play is important to children as well as getting to and from places (Horton et al. 2014). It is felt that using the framework of third places can help with understanding how these different purposes for using the built environment fit together and interact.

Threshold Spaces

Children's use of threshold spaces are a pertinent reminder of the importance of considering how children use their neighbourhoods aside from for travel purposes. They highlight how much of children's movement around their neighbourhood is not to go anywhere at all. Children's play is often seen as being confined to formal

playgrounds and play spaces in a neighbourhood. The relevance of threshold spaces demonstrates that this is not that case. Children can and will play in other less formal spaces and that when thinking about the use of space in this way, play should also be considered as part of a child's wider mobility.

There is a common perception that playgrounds are the only space for children in their neighbourhood, but if play is considered to be a part of children's mobility then it becomes obvious that the whole neighbourhood can be for children's use. Although playgrounds and play spaces can be important for children's play, they are often planned in to make up for inadequacies in the street layout (Cooper Marcus and Sarkissian, 1988; Woolley, 2008). Gaster (1991) notes that over sixty years, between 1915 and 1976, in one neighbourhood in New York, access had gradually been restricted for children, and wider informal spaces for children to spend time in had gradually made way for more formal playgrounds. As Rasmussen (2004) notes, we need to differentiate between 'places for children' and 'children's places' and take a child, rather than and adult-centred view on these.

In their work in Wrexham in Wales, Barclay and Tawil (2013) found that children identified residential streets as the most valued play space outside of the home. A study from New Zealand found that children spend most of their time within 500m of their house and the neighbourhood setting is of particular importance to them (Chambers et al, 2017). Similarly, Loebach and Gilliland (2016) found that around 95% of children's time in their neighbourhoods was spent near to home. Moving in order to interact with others, build social connections and play is important to children as well as getting to and from places (Horton et al, 2014). These spaces are also important in enabling social interactions for children, providing opportunity to play and in developing a sense of community (Brussoni et al, 2020).

There is limited evidence on the specific physical qualities that are required within a threshold space to enable a child to use it. Those features that impact on safety and perceptions of safety have been shown to have an impact on children's use and, in particular, traffic volumes and traffic calming interventions have been well reviewed

in the literature. In a systematic review of the literature, Lambert et al (2019) show that lower traffic volumes and speeds can help to support children's outdoor play. Home zones are one form of traffic calming that were introduced into the UK in 1999. These are locations where the street has been designed to reduce traffic speed and volumes and reprioritise people over cars, usually within quite a small neighbourhood area. In studies of home zones in the UK (Biddulph, 2010; Gill, 2007; Whitzman et al, 2010), children were found to play more in the street than before, taking part in a wider diversity of play types, as well as increasing interactions with their neighbours. Similarly, in their study of their children at play in 12 UK housing estates, Wheway and Millward (1997) found that traffic calming has a positive influence on the popularity of a street for play. They also found that roads and pavements close to housing were the most popular locations for play and where there was a likelihood of interaction with other people. Children preferred to play where they could be seen and largely preferred to stay playing close to home.

Cul-de-sacs have also been found to encourage high levels of play and interaction for similar reasons to home zones (Wheway and Millward, 1997; Handy et al, 2008; Islam et al, 2016; Sharmin and Kamruzzaman, 2017; Moore, 1986), particularly if they are linked by a footpath network too. This is in contrast to their impact on children's active travel, where some have suggested that they may encourage increased use of the car due to having to travel longer distances (Badland, 2012). Hochschild (2013) researched cul-de-sac life in Connecticut, US and found that culde-sacs are beneficial for children because either parents or their neighbours are able to watch children playing, parents perceive it to be safer, and the low traffic levels provide an opportunity for uninterrupted play. Cul-de-sacs also enable the creation of a semi-private space, which may help to provide a feeling of safety and security that other forms of street network, including permeable filters, do not necessarily do. This links to evidence that where spaces are well-overlooked and connected to each other by a network of footpaths, children are more likely to use them (Bornat, 2016; Wheway and Millward, 1997; Biddulph, 2010; Blinkert and Weaver, 2015)

The relevance of over-looking in threshold spaces is also shown with regard to high rise buildings. Gehl (2011) notes that between the third and fourth floors of a building there is a marked decrease in the ability to observe activities on the ground floor. As you reach the fifth or sixth floor, you are virtually out of touch with ground level events. High rise living for children often therefore leads to reduced independence and opportunities to get out and about in their neighbourhood. This is perhaps one of the reasons why, in his research, Gifford (2007) stated that he could find no evidence that high rises were good for children. A consistent finding within research in the past was that high-rise dwellers with small children are dissatisfied with where they live (Gittus, 1976; van Vliet, 1983). However, if high rise living is located with essential facilities and over-looked open space for children to play in it, some have suggested that it could be successful for children (Whitzman and Mizrachi, 2012). Prezza et al (2001) explored the neighbourhood attributes that are important for children's independent mobility and highlighted the importance of courtyards, which could also be a typology within high rise living. They found that these were used more by children than both private streets and parks.

The potential for social interaction that threshold spaces create is also of relevance in supporting their use. Some studies have found that if a street supports social activity, then it is more likely that children will use it (Biddulph, 2010; Bornat, 2016). Those who live in places that are traffic dominated and where interaction between people is limited have been found to have smaller social networks (Evans, 2006). Busy roads are a significant factor in reducing the potential for interactions and a sense of community. Appleyard, Gerson and Lintell's (1981) study of three similar streets in San Francisco, US found that those who lived on a light-trafficked street knew more of their neighbours, felt a greater sense of belonging and were more familiar with its physical features. A similar study was more recently completed in Bristol and found very similar findings (Hart and Parkhurst, 2011).

For children in particular, spending time in their neighbourhoods is not just about getting from place to place but is also about being comfortable spending time in their neighbourhood close to home. Children do not necessarily need a formal play space

to use, but they need to be able to find affordances in their environment that work for them, and they need the space and freedom to use their neighbourhood as they would like to.

Transitory Spaces and Destinations

For children to move away from the vicinity of their home, both transitory spaces and destination spaces become relevant. When moving around their neighbourhoods more widely, how walkable a place is is important to children. Southworth (2005) suggests that a walkable neighbourhood, in the context of adults, is an area with a high degree of proximity and connectivity, a dense networks of footpaths, links to public transport, a mix of land uses, high environmental quality and good quality street design. Features such as good connectivity and proximity of uses suggests a compact neighbourhood and there is convincing evidence that more compact neighbourhoods lead to more active travel for adults (Sallis et al, 2012).

In relation to travel to school, studies have shown that standard walkability measures can predict active travel (Larsen et al, 2009; Mota et al, 2007). Walking and cycling rates to school have also been found to be higher in more densely populated areas (Braza, Shoemaker and Seeley, 2004) and in a study on middle-school students in Oregon, US, Scholssberg et al (2006) found that fewer dead ends in a neighbourhood, and therefore improved connectivity, were predictive of children walking to school. The additional factor of safety also appears to be of particular importance in influencing how children get around their neighbourhoods (Carroll et al, 2015, Carver et al, 2014). There is evidence that road safety measures, such as controlled crossings, traffic calming, reduced speed limits and the presence and quality of footways will increase children's physical activity and active travel levels (Davison and Lawson, 2006; Timperio et al, 2006; Whitzman and Mizrachi, 2012). Boarnet et al (2005) found that footways, in particular, will enhance perceptions of safety and that a wider footway is more likely to encourage children to travel actively. In Brussoni et al's (2020) study, children would often try to avoid busy roads due to the lack of either a footway or a crossing point. Villanueva et al (2012) explored the

impact of the neighbourhood environment on children's independent mobility. Similarly to studies on active travel, they found that creating safe and accessible places and routes and low traffic streets facilitated children's independent mobility. The likelihood of independent mobility dramatically reduced where the children lived on a main road. Similarly, Page et al (2009) found that low traffic and access to local destinations was the most important determinant of the independent mobility of 10-11 year olds.

Linked to the theme of safety, the potential for social interaction on streets and the presence of other people is also important to children (Mitra, 2013; Timperio et al, 2006). Timperio et al (2006) found that if there were perceived to be other children and adults out in the neighbourhood, children would be more likely to travel actively. This can also help to reduce fear of strangers for parents (Foster et al, 2015). In their study exploring the various factors influencing elementary school children's travel to school in California, McMillan (2007) found that younger children were more likely to walk to school if at least 50% of the homes they walked past had windows facing the street.

Another factor that is more relevant to children than to adults, is that travel around their neighbourhoods is not just about getting from place to place, but is also about the experience (Mitchell et al, 2007; O'Brien et al, 2000; Mackett and Paskins, 2008; Ross, 2007; Romero, 2015). In a study in Australia with 9 -11 year olds, Romero (2015) found that a child's walking experience was created largely by features of the natural environment and was seen as a sensory experience. Children will often note smaller details and features of streets that would be unobserved by adults (Kullman, 2014). Features such as tree-lined streets, small neighbourhood blocks, and pedestrian-oriented buildings may encourage more enjoyment of walking for children and may also be more significant for them than for adults (Mitra, 2013). Dead end streets and cul-de-sacs will generally be seen to have a negative impact on connectivity but they can have positive benefits for children in creating safe and social space, as previously discussed. This is even if they do not always allow for taking the shortest or quickest route to a destination. These findings are helpful in

beginning to explain why the type of built environment that encourages an adult's neighbourhood mobility is not necessarily the type or environment that encourages a child's. Janssen and King (2015) showed in their study that although an association is usually found between typical measures of neighbourhood walkability and active travel for adults, the same is not true when it comes to children.

Children are also more likely to use transitory spaces if they have somewhere to go and the concept of destinations and the proximity of these to a child's neighbourhood is therefore relevant to consider. Sharmin and Kamruzzaman's (2017) meta-analysis of existing research into children's independent mobility found that mixed land uses were one of the few factors that consistently had a positive association with children's independent mobility. School is the destination that most children will travel to frequently. As previously noted, distance to school has regularly been found to have an influence on children's active travel (Mitra, 2013). In a systematic review of GIS studies exploring active travel to school, Wong et al (2011) found that the only consistent correlate was distance to school. Other factors such as connectivity and density were not consistent across all studies.

Other important destinations for children are places to meet and play with friends (Nordström, 2003; Chawla, 2002), which could include parks and playgrounds, friend's houses or cafes. Brussoni et al (2020) highlight the importance of having a range of diverse amenities within a neighbourhood as well as access to nature. The children in Carroll et al's (2015) study identified local parks, food stores and community facilities, such as libraries and community centres, as being important destinations to them. Loebach and Gilliland (2016) also highlight the importance of commercial spaces in a neighbourhood, such as shops, in supporting children's mobility.

Children's Third Spaces

There is significant evidence that the built environment has an impact on children's mobility, particularly at the neighbourhood level, although the exact relationship and the different factors that influence usage can be difficult to disentangle (Giles-Corti et

al, 2009). The framework of third places has helped to give a holistic consideration of children's use of the public space in their neighbourhoods, considering the threshold, transitory and destination spaces. It highlights that there are many more features to consider for children in a neighbourhood than just formal playgrounds and play spaces.

The premise of walkability is important for children's neighbourhood mobility, but the features that are important for children may be different to those for adults. Perceptions of safety appear of increased importance in impacting how children use spaces in their neighbourhoods. With regard to the design of the neighbourhood, low traffic volumes and the potential for overlooking can help with this. This will also be discussed further later in this chapter in relation to parental influence and permission granting. The importance of the opportunity for social interaction in these spaces has also been shown as being particularly relevant to children, and the ability to have a sensory experience in the space. Regarding destinations, discussions around the proximity of places to go also link back to the discussion in chapter 2 around the size of a child's activity space. A child's activity space may be smaller because they have all that they need within their local neighbourhood and so do not have a need to travel further to access spaces.

This section will now move on to consider the other physical element of children's neighbourhoods, but that also has other wider influences on children's lives - that of the school.

School Life

"Schools are central to the social geographies of everyday life." (Collins and Coleman 2008, 281)

School in the 21st century is, for most children, a significant part of their daily lives. In the UK, the majority of children over five (and many four year olds) attend school for at least six hours per day, five days per week. There is a complex relationship between the home, neighbourhood and the school for children, which is bound up with broader socially constructed relations such as age, gender and ethnicity (Hollingworth and Archer, 2010) and it is this relationship between settings that can influence how a child sees and identifies with a place (Proshansky and Fabian, 1987). Some children may try to intentionally keep the influence of school separate to their daily home lives and for others it is more intertwined (Alldred, David and Edwards, 2002). Hollingworth and Archer (2010) note the connotations that particular schools can hold and how this can impact on children's experience of these, particularly inner city urban schools, which their study in London focussed on. They highlight how schools do matter to children and even though children may not like their school, they will often defend it when questioned.

Schools are one of the few institutions that can be found in almost every urban and suburban neighbourhood. They are sites of common experience for children, and can provide a link across different generations, reflecting the social characteristics of a neighbourhood and often contributing to social cohesion (Collins and Coleman, 2008). Philo and Parr (2000) compare schools to other institutions, such as prisons and hospitals, stating that the similarities are that they isolate themselves from mainstream social life. Schools can operate in an isolated way but they also form a part of a community and a neighbourhood much more than a prison or hospital tends to do, as children's time is dispersed between the home, the school and the neighbourhood.

Although the school's primary role is education and learning, schools also teach social values and knowledge and concepts such as obedience, punctuality, order and respect. Proshansky and Fabian (1987) note that a child's repeated exposure to the school setting not only influences the way in which they learn, but also their behavioural strategies. There are also levels of restriction that may be higher than in other parts of children's lives and children often feel more constrained within school. Children have noted the regimented aspects of the school day, such as the inability to eat when you want to, lose your temper or generally be loud (Alldred et al, 2002). In this sense, the school can create its own distinct identity and rules within the school setting, which is usually controlled and disciplined by adults (Fielding, 2000; Holloway and Valentine, 2003) and set up in order to facilitate adult authority and surveillance (Catling, 2005).

The relationship between children's experience of school and their wider neighbourhood is not always clear. There are certainly influences, as noted above, and there are some school policies that may influence how children behave both in and out of school. With regard to children's play, in the UK children's opportunities for outdoor play at school have been gradually reducing, with shortened break times throughout the day and increasingly limited opportunities for play within the playground (Blatchford and Baines, 2006; Woolley and Griffin, 2015). School playtime is one of the few times of the school day when children are allowed to go outside. There may be more freedom of movement in the playground during playtime, but it is still usually "a space conceived by adults to contain children at school" (Thomson 2005, 76). The messages that the school gives to children on their behaviours and freedoms has been shown to affect what they do. In Barclay and Tawil's (2013) study in Wales, they found clear differences in children's views on break times, depending on the school they were at and the prevalent attitudes towards children's freedoms to play. There is also evidence to suggest that the moral codes and messages given out by a school influence children's daily learning activities and behaviours (Fielding, 2000). What is less clear if then extends to their attitudes outside of the school environment.

School policies on travel relate to how children get to and from school and are therefore relevant when considering children's mobility and how they use their neighbourhoods. Many schools in the UK now have school travel plans in place, which are often intended to try to encourage more active travel (Hinckson and Badland, 2011; Hinckson and Faulkner, 2018). The statutory walking distance to school in the UK is two miles for children under 8 years old and three miles for children aged 8 and over (UK Government, 1996). Once distances are above these, the local authority is responsible for providing appropriate transportation as it is assumed that the distance is too far for them to walk. However, from a policy perspective, it's also important to note that the average travel distance to school in Norway in 2001 was 4.9km, where there are relatively high levels of active travel, both by walking and cycling (Fyhri et al, 2011), highlighting the strong influence that policy and cultural factors can have on travel behaviours.

Distance to school is still one of the few factors that is consistently found to affect children's travel habits to school and their physical activity levels. The National Travel Survey for England found that primary school children whose journey to school was less than one mile were more likely to walk (Department for Transport, 2014). In a systematic review, Mitra (2013) found it to be the most significant factor in determining whether or not a child will travel actively. A number of studies have found that as the distance from school increases, children are less likely to walk or cycle (Davison and Lawson, 2006; Ewing, Schroeer and Greene, 2004; McMillan, 2007; Panter et al, 2010; Timperio et al, 2006; Trapp et al, 2012; Giles-Corti et al, 2009; Oliver and Schofield, 2010). In Timperio et al's study (2006) exploring the travel behaviours of 5 to 6 year olds and 10 to 12 year olds in Australia, they found that the likelihood of a child travelling actively to school was 5-10 times more likely if they lived 800 metres or less away from school.

Distance to school is also one of the most important factors when considering whether or not children are independently mobile (Fyhri and Hjorthol, 2009; Zwerts et al, 2010; Lin et al, 2017) and school travel policies may have an influence on who a child travels *with* to school. In the UK, the NSPCC (2020) advise that "children at

primary school aged 6-12 are usually too young to walk home from school alone." Many schools in the UK also still refer to previous NSPCC guidance which stated that "children under 8 should not be outdoors for a considerable length of time unaccompanied," as can be found doing a Google search for this phrase. This is relevant as it is common for schools to have policies on what age a child is allowed to walk home to or from school on their own although, legally, there is no lower age limit. As an indication of how parents perceive this, a survey by the organisation YouGov (2012) found that age 10 is the average age that Britons believe is ok for a child to walk home from school on their own.

School is influential on children's everyday lives and their behaviours whilst at school and there are certain elements of school life that have a clear impact on children's use of their neighbourhoods. Some of this is to do with the physicality of the school and its location, and there has been much research on children's travel to school in particular. There are also other cultural and political influences that stem from the school and can influence children's broader neighbourhood mobility. The impact of school's policies on children's use of their neighbourhoods is less well understood, but the evidence suggests that this could have an impact, given the integral part a school plays in a child's life and it warrants further investigation. The school also often creates an important link to their social life and links to the wider community, which is the focus of the final part of this section.

Community and Social Life

"If we rely on a mechanistic or legalistic approach without changing people's values, then we will be unlikely to achieved long-term changes." (Tranter and Pawson 2001, 46)

Another important factor in influencing how children use their neighbourhoods is their role within the community and how they fit into this. High levels of social capital can be defined as dense networks of reciprocal social relations and interactions. They have been linked to trust in a community and stronger bonds across social divides, as well as improved community cohesion (Urry, 2002; Coleman, 1988; Putman, 2001). With people now tending to spend more time on their own than with others, both as children and as adults, and finding their home a more comfortable place to spend time in, it has been suggested that there has been a gradual reduction in community life and social capital and an increase in individualism (Coleman, 1988; Putnam, 2001). With a similar sentiment, Wellman (2001) suggests that community interactions now take place inside the private home. Tranter and Pawson (2001) highlight how this can be self-reinforcing and the less people that use the streets and a neighbourhood, the less conducive it becomes to children's mobility and independent access. Added to this is a reduction in birth rates, which now means that there are a lower proportion of children in neighbourhoods compared to what there was in the past, reduced from 24.5% under 15s in 1976 to 18.9% in 2016 (ONS, 2017) and predicted to reduce further.

Reacting to these changes in sociality, social media networks and online communities have developed, which attempt to make up for the loss of these face to face interactions (Wellman, 2001), though many younger children may not have access to these. The phenomenon of the 'play date' has also developed, where parents try to organise a child's social life for them and invite children, often from another neighbourhood, to play (Mose, 2016). Practices such as these highlight shifting notions of community away from neighbourhoods and geographically defined areas to communities of shared interest instead (Giles-Corti et al, 2010).

Yet the evidence suggests that levels of social capital within a neighbourhood are important for children's independent mobility and also impact on children's outdoor play (Marzi, Demetriou and Reimers, 2018; Lambert et al, 2019). Links have been found between the degree of trust and familiarity that exist within a neighbourhood and levels of children's independent mobility (Lin et al, 2017). Even where neighbours do not necessarily know each other that well, if they feel a part of a community and have social contact with each other, they are likely to feel safer (Anderson, 1991). Parents are often aware that having neighbours or friends nearby to play with is an important influence on their child's outdoor play (Lee et al, 2015; Veitch et al, 2006; Karsten and van Vliet, 2019; Vlaar et al, 2019). Where there is less social contact and control within a neighbourhood, parents are less willing to let their children outside (Karsten, 2005). In their study on neighbourhood social capital and children's spatial freedoms, Weller and Bruegel (2009) explored children's lives in three inner-city and two suburban locations in England. They found that when a child's parent had higher levels of social capital, they were more likely to grant their child autonomy in their local area thus, they say, providing increased opportunities for the children to develop their own social capital too. Children with older siblings have also been found to be more likely to be granted neighbourhood freedoms (Ayllón et al, 2019; Christian et al, 2016; Mackett et al, 2007). This may relate to the fact that children are also more likely to want to spend time in their neighbourhood if there are other children around and there are adults in the neighbourhood that they can trust (Brussoni et al, 2020; Porskamp et al, 2019).

This range of evidence points to the importance of community connections for children for three main reasons: the opportunity to build social networks and sociability, the development of trust and reciprocity; and developing of a sense of belonging and place attachment (Schaefer-McDaniel, 2004). Schaefer Mc-Daniel (2004) discusses the inter-relationship between these three elements, highlighting, for example, how if a child is able to trust someone more they may have more positive social interactions. This can also be linked to the importance of relatedness that is highlighted in Ryan and Deci's (2020) Self Determination Theory. Where there

are strong ties and closer relationships it is suggested that well-being will be improved. This has been demonstrated in a number of studies with children, where social relationships have consistently been found to be important to them, particularly those of family (Fattore, Mason and Watson, 2016; Rees et al, 2010; Gonzàlez-Carrasco et al, 2018; NEF, 2004). People are likely to experience greater happiness and feelings of belonging when they interact with more people (Sandstrom and Dunn, 2014). Even just being in the presence of others and watching their movements can increase connectedness (Brömmelstroet et al, 2017).

This discussion highlights there are other elements at the neighbourhood level that are important influence on children's neighbourhood mobility, in addition to the physical environment itself. As was highlighted in the discussion on children's third places, opportunities for social interaction in a place are particularly important for children. The built environment can influence these to some degree, but this is also tied up in existing neighbourhood social networks and community connections.

Conclusion

This section has focussed on the features of the neighbourhood that are important to children. This includes both the design of the space, as well as the opportunities to build community connections and to have social interactions within it. The influence of the school in bringing these two elements together has also been discussed.

It has been evident throughout that it is difficult to consider this without also linking to other contextual factors, some of which have already been discussed, and how a space is perceived. This links to those factors at the broader level of the neighbourhood, such as social, cultural and political influences. However, it also links to those factors at the lower level of the neighbourhood, such as the home and family life, as will now be considered.

The Home Environment

The discussion now moves on the a child's home environment and the influence of both where they live and their family on their neighbourhood mobility. This home environment forms a part of a child's neighbourhood, but warrants a more detailed exploration as it is where they spend most of their time. As will be seen from the discussion, the influence of a child's parents on their neighbourhood mobility is of particular importance to understand.

Family Life and the Home

Alongside changes in the nature of childhood and how children are perceived in public space, there have been ongoing changes to family and household structures and, what has been theorised as, the gradual privatisation of family life. In the past 100 years or so, the settings of both home and school have become increasingly significant for children and a private sphere of home and family has been created to which children naturally belong (James, Jenks and Prout, 1998). This shift has also had impacts on children's community life and neighbourhood interactions.

In the UK, homes have become more comfortable to spend time in and have also become increasingly important as a physical space that people want to spend both time and money on. Home ownership in the UK has increased from 10% in 1914 to 65% in 2016 (Barton, 2017). This links to the rises that have been seen in consumerism and a growing affluence (Abela, 2006). Real household income per head doubled between 1961 and 2000 (Social Trends, 2002; cited in Rosen, 2003). As Valentine (2004) found in her study, those children who lived in rented accommodation were less likely to be home based and more likely to play outdoors and to be considered 'outdoor children.' This leads to the question of whether the drive for home ownership has led to people to want to stay inside those homes more. Karsten (2005) states, for example, that the private space within the home has now shifted from an adult space to a child space.

Although the average house size has not necessarily increased, the amount of space per person has, largely due to a reduction in household size. In 1961 in the UK, the number of households with four or more people was 35% compared to just 20% in 2011 (ONS, 2013). Things that are now taken for granted such as central heating, hot water and and indoor toilets were relatively uncommon in the past. In 1964, only 8% of households had central heating, compared to 91% in 2000 (Rosen, 2003). All of these factors provide reasons why people (including children) may want to spend more time inside their homes than outside of them. Children are also now very likely to have their own bedroom, and in Bovill and Livingstone's (2001) study they found that even amongst 6-7 year olds, 56% did not share a bedroom. It is known that children like to play in close, intimate spaces and that they value a sense of enclosure and privacy (Burke, 2005) and arguably, having their own bedroom can provide them with this. In the past, children would have more commonly shared a bedroom with siblings or even other family members.

Of further significance to children is the rise in consumerism and the culture of consumption, which with it has come an increase in toy ownership. Ownership of toys has spread with consumer affluence (Best, 1998) and it is now commonplace that children will have a wide range of toys at their disposal inside their home. This increase in toy ownership has also been driven by shifts in family organisation. With less children per household and couples delaying parenthood, there is usually more money available to spend on toys (Best, 1998). This contrasts with children living at the start of the twentieth century. Linden's (1999) study (cited in Sandberg and Vuorinen, 2008) showed that people born between 1917 and 1936 tended to have very few toys as children and individual play was the most common form of play. Best (1998) also notes how nostalgic critics recall days when toys were simpler and better and when children had to make their own, fostering creativity and imagination.

With a wider range of, usually indoor, toys at their disposal, children may choose to stay inside and play with these rather than going out into the neighbourhood to meet friends. This is in contrast to children's experiences in previous generations where the private space of the home was hardly used as a space to play (Karsten, 2005).

This fits with parents now wanting to keep their children in the home as Valentine (2004) found, as they felt it was easier and safer, often also using tactics such as television or online access to make children want to stay in. It appears to be in contrast to parents earlier in the twentieth century who preferred their children to be playing outside.

The rise in maternal employment is also related to family life. In 1961, just 20% of women were employed in the UK, compared to 73% in 2000 (Rosen, 2003), meaning that mothers are at home less to care for their children. The impact that this has had on children's mobility is unclear. Some argue that this means that children have *necessarily* been institutionalised (de Coninck-Smith and Gutman, 2004; Edwards, 2002). However, this does not seem to have led to parents and children spending less time together (Hsin and Felfe, 2014; Galinsky, 1999). Mothers working more hours, for example, often means that they choose to spend less time on other tasks, such as sleep, leisure and housework, so that they can spend time with their children (Bianchi, 2000) and paternal employment rates have also been decreasing (ONS, 2013). The quality of the time that parents now spend with their children may also be better, as working parents often choose to take part in dedicated activities with their children rather than other household tasks (Nock and Kingston, 1988).

This is of relevance when considering children's independence and autonomy in their neighbourhoods, and how this relates to relationships and time available to spend with their parents. It has been noted that in the UK, for example, that street play has been characterised by 'eyes on the street' and parents being around to watch out for their children. This suggests that a rise in maternal employment might lead to reductions in children's mobility. Yet in some cultures, both parents being in employment appears to be a driver for children's necessary independence (Kyttä et al, 2015). In Finland in 2002, the proportion of families in which both parents worked full-time was 59%, compared to 28% in the UK. Yet Finland has some of the highest levels of independent mobility in the western world. In their historical analysis of everyday mobility in family life over the course of 60 years, Pooley, Turnbull and Adams (2017) argue that mobility is closely linked to changes in the life course, and

as influences on this have changed over time, so has mobility. When it comes to children's mobility, this is closely linked to how family and household structures have changed, but Pooley, Turnbull and Adams (2017) also highlight how this can vary a lot at the individual level and that not everyone has seen a similar impact.

Changes in family life and the home have clearly had a mix of influences on children's lives. It is evident that it is one of the factors that has an influence on children's mobility, but at times it is tied up with other influences, which make the impacts more difficult to understand. Linked to this is also the ongoing influence of the parent and their particular role in children's lives, as will now be discussed.

Parents as the Gatekeeper

Closely following on from the theme of family and home life is the consideration of the parents' role in children's neighbourhood mobility. This relates to the role that the parent takes in granting permission to their child and of particular relevance to this is the theme of fear and safety. Parents are the gatekeepers of their children (Riazi et al, 2019; Brussoni et al, 2020) and a wide range of research shows that it is the parents' fears that will influence whether or not children are able to experience freedom in their neighbourhoods or not. This appears to be regardless of whether or not the child themselves is fearful.

Parental perceptions of safety are an important factor in whether or not children are mobile and allowed to move around their neighbourhood (Timperio et al, 2004; McMillan, 2007; Kelty, Giles-Corti and Zubrick, 2008; Carver et al, 2008; Veitch et al, 2006; Loebach and Gilliland, 2016; Alparone and Paccilli, 2012; O'Brien et al, 2000). Many studies have found them to have the strongest correlation with children's independent mobility, over and above any physical features of the built environment (Riazi et al, 2019; Mitra et al, 2015; Foster et al, 2014; Carver et al, 2008). The most commonly cited concerns from parents are either those in relation to traffic safety or to do with fears regarding 'stranger danger' (Mitra, 2013; Kelty, Giles-Corti and Zubrick, 2008). These fears are often strongly influenced by societal factors. An

example of how fear can be exaggerated in a person's mind is 'stranger danger,' which is a regularly cited fear by parents of why they won't let their children outside on their own (Department for Transport, 2014), in spite of the actual risk being marginal (Bentley et al, 2017; Creighton and Tissier, 2003; May-Chahal and Cawson, 2005). In the case of neighbourhood violence, a review by Burdette and Whitaker (2005) highlights that parents' perceived danger has a greater impact on children's outdoor play than actual crime statistics. A UK study found that of the parents surveyed, 45 % identified primary school children of at risk from abduction, 34% at risk from traffic accidents and only 1% at risk of accidents in the home (Valentine, 2004). Valentine (2004, 99) reflects on these perceptions compared to the evidence of actual risk, stating that "mothers and fathers regard their children to be most at risk from strangers in public space, despite the fact that statistically children are more at risk in private space from people known to them."

These perceptions of fear may also be linked to how much a parent trusts others in their community, linking back to the point that parents with higher levels of social capital or more likely to grant their children permission to use their neighbourhoods independently (Weller and Bruegel, 2009). Parents who have higher neighbourhood satisfaction (Harten and Olds, 2004) and perceive their neighbourhood as more walkable (Tranter, 2010) are more likely to let their children out independently. Prezza et al (2001) found that children whose mothers have more neighbourhood relations are more likely to be independent and that this helped to overcome fears of social danger for both themselves and their children.

Compared to parental perceptions of safety, there is less research on children's perceptions of safety in their neighbourhoods, though it has been found that parental fears will influence these (Pain, 2006). The evidence that exists suggests that there are discrepancies between parent and child perceptions and that children are likely to report less concern around road safety and strangers than their parents (Timperio et al, 2004; Aliyas, 2021; Huertas-Delgado et al, 2018). Unlike parental perceptions of safety, which have been repeatedly shown to influence children's neighbourhood freedoms, a similar link to children's perceptions of safety is not as clear. In a

Belgian study, only parental perceptions of safety were found to be linked to children's independent mobility (Huertas-Delgado et al, 2018). Brussoni et al (2020) suggest that there is a link, but this may be due to parents own perceptions influencing their child's views, as is also suggested by Pain (2006).

Children require parental permission to use their neighbourhoods freely and as they wish. As this brief discussion shows, whether or not permission is granted by a child's parents is often influenced by social and cultural factors in relation to how their parents perceive their neighbourhood and what is deemed the right thing to do (Gillies, Edwards and Horsley, 2017). Cultural influences around fear can have an impact on how people feel about a place (Furedi, 2006) that can then lead to direct impacts on children's mobility. As the previous discussion on the design of children's neighbourhoods showed, safety considerations are often heightened when it comes to children's mobility. Perceptions that children should be accompanied in public space can also have an impact on parental decision making (Gillespie, 2013).

Both their parents and a child's home life are important influences on their neighbourhood mobility but again, do not function on there own, and link to the other factors already discussed in this chapter. Linked to all of this, of course, is the individual features of the child themselves.

The Individual

There are a range of individual characteristics that warrant exploration and that may have an influence on how children behave and spend time in their neighbourhoods. As with the previous discussions in this chapter, these factors are also strongly tied up in social and cultural influences. Indeed, it is these influences rather than any biological differences that appear to most significantly shape the impact that these factors have on children's behaviour.

Gender

The differences that have been found between boys and girls with regard to their use of public space are linked to both biological differences as well as how the wider world and the societal factors within it influence them. Any differences between boys and girls begin in early life are genetic or hormonal (Matthews, 1992). In simplistic terms, it appears that these differences in early life become enhanced over time by social and cultural factors and, as these continue to develop, their impact on children via their experiences becomes more significant. For example, some biological difference has been shown in toy preferences of boys and girls at an early age (Todd, Barry and Thommessen, 2017). As children develop, this is then magnified by social influences, such as parents reinforcing these differences with similar toy purchases (McCarthy, 2016). In the context of children's neighbourhood experiences, these social and cultural influences play out in various ways, but differences in perception of fear and safety are most evident in the research when it comes to exploring differences between boys and girls. These perceptions link back to parental perceptions and parents being more fearful of a girl spending time in their neighbourhood than a boy. Girls, themselves, however, also have a role to play in this, related to social and cultural factors restricting what they think is possible. Brown et al (2008) found in their study in England that it was not that the parents were not willing to allow their girls to do something, but that girls were less likely to ask to do it in the first place. This highlights how what a child is *allowed* to do is often part of a negotiation process with the parent (Valentine, 1997; Pooley, Turnbull and

Adams, 2017), and it is those social and cultural influences on both the parent and child that are important.

A number of studies have shown that boys tend to have a greater spatial range than girls and that they experience fewer parental restrictions (Porter, Spark and de Klein, 2020; Hillman et al, 1990; Matthews, 1992; O'Brien et al, 2000; Prezza et al, 2001), but this does not necessarily provide an accurate picture of the differences and similarities in boys' and girls' neighbourhood experiences. When looking more specifically at the environmental correlates of independent mobility in a systematic review, Marzi, Demetriou and Reimers (2018) found that the evidence to show differences in gender is more inconsistent. This is not to say that no differences were found, but that they were not consistent across the studies reviewed. Thomson and Philo (2004) acknowledge this complexity and suggest that, whereas historic evidence pointed to boys having greater spatial ranges than girls, this may now be shifting. Skelton (2000) found girls using street space a lot and Thomson and Philo's (2004) own findings from Scotland reflect this increase in girls' visibility on the street. They found that girls were more likely to attend after school clubs and there appeared to be more parental imposed boundaries for girls, but in terms of the actual spatial range there was not an obvious distinction between girls and boys.

When considering the differences between boys and girls then, it seems relevant to raise the question of whether or not measurements of spatial range as a way of assessing children's neighbourhood mobility are necessarily the most appropriate. Brown et al (2008) also point out how girls use spaces in different ways to boys and highlights the need to think more holistically about how children use space. Girls have different space preferences, with girls more likely to want space for socialising. Brown et al (2008) also found that girls would spend less time playing with friends nearby in their own neighbourhood, but may be more likely to travel a bit further to a friends' house in another neighbourhood than boys. These points also need to be considered when thinking about differences between boys and girls and may help to explain why inconsistencies have been found in the evidence as to the impact of environmental correlates on boys and girls. There appears a need to take a more

nuanced approach (Spilsbury, 2005; Kyttä, 2004) and to consider the way in which neighbourhood mobility is being measured.

Ethnicity

In comparison to gender, far fewer of the studies on children's use of their neighbourhoods and children's mobility consider ethnicity. Those that have explored this, have found that there are differences though they appear to be relatively poorly understood. There are no large scale studies available that have explored this in depth or that have been able to disentangle the impact of other related individual factors, such as religion and socio-economic status, arguably because these factors are so intertwined. Braza, Shoemaker and Seeley's (2004) study from on children's active travel in the US factored in ethnicity, but note that their data did not yield insights into the role of ethnicity in general, partly due to its strong link to socio-economic status. Differences were found more at the neighbourhood than individual level. In their study of inner London, Weller and Bruegel (2009) found that children from minority ethnic backgrounds spent less time autonomously in public space than White British children do. Other studies in the UK found it was girls from ethnic minority groups who were the most constrained in where they were allowed to travel (O'Brien et al, 2000; Wheway and Millward, 1997).

Outside of the realm of children's neighbourhoods, but still of relevance, research on use of parks by ethnicity suggests there are important differences that need to be understood, relating largely to cultural preferences. Snaith (2015) researched people's use of the Queen Elizabeth Olympic Park in East London and found that there were varying views on the park by different ethnic groups, concluding that the design of parks tends to exclude many minority ethnic groups from using them. As with gender, ethnicity is tied up in a multitude of social and cultural factors. It can be difficult to disentangle these factors from each other, but it is important to be mindful of the influence of ethnicity as one of the factors that has an impact upon children's experiences.

Social Class

Moving onto considering the link between social class and children's mobility, the complexity continues to grow, in part because social class is inherently difficult to measure and is also often strongly tied up with ethnicity (Diemer et al, 2013; Liu et al, 2004). Social class is both something that is measured quantitatively, considering such factors as family wealth and background, but is also something that is imbued with subjectivity and linked to how a person perceives themselves (Liu et al, 2004). This is of relevance when considering the impact that it has on children's use of their neighbourhoods and the interaction between both individual and neighbourhood level socio-economic status (Wen et al, 2006).

In the UK context, white, working class children are more likely to take part in independent, outdoor play (Aggio et al, 2017; Dodd et al, 2021), though less of a link has been found to their independent mobility. Similarly in New Zealand, Carroll et al (2015) found that it was the low-income suburban children that were most likely to be involved in informal play in their neighbourhoods. Skelton (2000) suggests that this is because they are likely to have less space available indoors. Conversely, middle class children are more likely to have more space available in their home as well as additional resources to take part in more organised activities. Thomson and Philo's (2004) study in a Scottish new town also had similar findings, though they note the challenge of disentangling the impact of social class from other variables, such as age, ethnicity and gender. In their study of children's play and independent mobility, Dodd et al (2021) also note the challenge of separating out the influence of social class from other factors.

These differences also appear reflective of the situation in the US. In her study with parents in the US, Lareau (2011) describes quite clear differences between parenting styles in different social classes. She named the parenting style of the middle-class parents as 'concerted cultivation' based on how the middle-class parents she saw would try to bring up their children to give them a range of experiences and opportunities, as this is what they felt was important (Karsten, 2015;

Lareau, 2011). This would often involve taking them to after-school clubs and organised activities, and scheduling most of their time. The parenting style of the working-class parents, on the other hand, was what she named 'accomplishment of natural growth.' These parents would let their children play and give them the independence to flourish, focussing more on ensuring they were fed and clothed. The children from the middle-class backgrounds learnt new skills, could handle humiliation and glory, and could perform and present. The children from working-class backgrounds learnt to entertain themselves, played outside more and would spend more time with family and extended family members.

Yet other studies have shown the opposite of these findings when it comes to social class differences, highlighting the cultural influence on these. In both Germany and Finland, research suggests that it is the middle-class children that are more likely to be playing out and independent and the working classes who are more likely to be indoors (Kyttä, 2004; Blinkert and Weaver, 2015), demonstrating how there are differences between different societies in what is socially valued. Parent et al (2021) found it was those families with higher incomes and from European backgrounds in Canada who played outdoors the most. In the past in the UK, it was those that were from a higher social class were more likely to be able to explore their neighbourhoods than those from lower classes (Matthews, 1998), mirroring what is still seen in Germany.

What this discussion highlights is that there are individual features of the child that are likely to influence their neighbourhood mobility. Although there are sometimes physical differences evident between these features, they are also strongly influenced by social and cultural factors in terms of how they are perceived. As has been a thread throughout this chapter, the impact that these individual features have is often difficult to single out. They are strongly dependent on their interaction with other factors, including the neighbourhood itself.

Conclusion

This chapter has used the theoretical framework proposed in chapter 1 to begin to consider the various factors that have an influence on a child's mobility. Starting with the influence of the natural environment, it has then gradually narrowed its focus down to the child's neighbourhood, their home and family life and finally, the individual features of the child.

The discussions have shown that although many of these factors have an influence in their own right, they are all interrelated. It is often only when the interactions between factors is understood that their true impact can be ascertained. Although the built environment is an important influence on children's neighbourhood mobility, it is important to understand the other factors that influence children's behaviour and how these work with the physical features of a neighbourhood to impact on a child's mobility. This links to the idea of thinking about the 'social geography' of children's neighbourhood experiences (Thomson and Philo, 2004). Children are social beings and they will respond in different ways depending on how these factors come relate together. As Biddulph (2012, 179) notes, "if I design a street in a certain way, then types of activity become probable or possible" but it does not guarantee that certain forms of activity will take place.

The review has highlighted a number of gaps in the literature. In relation to features of the built environment, it has highlighted a gap in understanding of how, or if, standard walkability measures apply to children and the relevance of this measure in relation to children's broader use of their neighbourhoods. Linking to findings from chapter 2, walkability measures focus strongly on getting from A to B quickly and efficiently, whereas children's movements in their neighbourhoods are often different to this. This links to a further gap in the research in relation to children's use of threshold spaces. Children's use of these spaces and their relevance to children's travel and play appears poorly understood. The study will begin to fill this gap by exploring children's use of these spaces and how this links to their wider use of their neighbourhoods.

The review also highlights how there is a gap in knowledge of the influence of the school on children's neighbourhood mobility, outside of the mode of transport that children take to get there. The school's influence on children's broader use of their neighbourhoods is not well understood, nor is its influence on who children travel with to and from school. The study will explore this link further and aim to improve understanding in this area. There are also gaps in the literature when it comes to understanding the influence of a child's ethnicity and social class on their neighbourhood mobility. The study will try to add to this where possible, though the small sample size may make it challenging to generalise in this regard.

Limited literature has been identified that explores children's mobility throughout the year and particularly in the winter months. This study will add to this by specifically working with children in the winter time. This should help to better understand their mobility at this time of the year and how it might differ to the summertime.

On a more practical level, this review has highlighted the poor understanding of children's use of public space within policymakers and planning professionals in the UK context. The study aims to provide findings that can be used to support improved decision making in this area and provide policy recommendations that could be applied in practice.

CHAPTER 5: Methodology and taking a Child-Centred Approach

This chapter describes the motivations for the research study and the methods chosen. It discusses the methodological focus of the study, details how the study was implemented and those methods that were used.

Child-Centred, Reflexive, Ethnographic

The main aim of this research is to contribute to understandings of how children experience and use their neighbourhoods, working with children directly in order to explore this. The study is underpinned by an ethnographic approach with the aim of providing an in-depth account into the social lives and culture of children's mobility. It does this by collecting multiple layers of data over a relatively short period of time, and is influenced in this way by forms of rapid ethnography (Fetterman, 2010). The study is not wholly ethnographic. Yet the methods used enable the capacity to collect data from children's complex social lives and to then delve deeper into the findings where necessary (Vindrola-Padros and Vindrola-Padros, 2018) and so are aligned with ethnographic approaches. Although ethnography, as a research approach, was originally developed as a means to understand and describe other cultures, it has now become a more commonly adopted research method for studying elements of a researchers own culture. It enables an approach to research that allows the researcher to learn and understand participants' understanding of their world. It therefore takes an open minded approach to research rather than starting out with a fixed hypothesis to test (Agar et al, 2005).

With regard to children, ethnography has developed as an important research method to explore children's lives and social worlds (James, Jenks and Prout, 1998), partly driven by altered believes in children's agency and a growing acceptance that children are active social agents, in control of their own experiences.

The study takes a child-centred approach, based on the principle that children know their own lives best. As Matthews (1998) states "rather than assuming children know less than adults we suggest that they may know something else." This is based on the conceptualisation that childhood is a social construction and that how children are treated should relate to their cultural and social identifiers rather than the fact that they are, simply, children (James and Prout, 1997). This child-centred approach filters through from the ethos of the research and its objectives in terms of exploring children's experiences of place. Throughout the research, a focus is retained on questioning what the children's behaviours mean and how they feel about their experiences, rather than simply taking them at face value.

There are various considerations to be made regarding the researcher's and the researched's power balance, particularly when it comes to researching children (Christensen and James, 2017). As an adult researcher, I understand the importance of being mindful of the bias that can be put onto any research that involves working with others different to myself. Children, in particular, see the world very differently from adults.

Immediately, within an adult-child relationship, it is assumed that the adult will have power and it is only by taking specific steps to negate this assumption that an attempt can be made to overturn it. Without this concerted shift in power balance of the adult-child relationship, there is a risk that the children will not fully engage with the process. Acknowledging that there is initially this adult-child imbalance, can help to redress it throughout the research process and lead to taking a much more child-centred approach to the research overall. This child-centred approach to research is growing in acceptance and is now well recognised as a way of learning about children's views and how they live their lives, as discussed by Ross (2007). Although as an adult, I accept that it may not be possible to be wholly child-centred in my approach, I have tried within my methods to shift the balance away from myself and towards the child.

It is important to be aware of a potential romanticisation of the past by adults looking back on their childhoods. Taking a child-centred approach to the research can also help to avoid this and ensure that it is the children's experiences and feelings in the present that are considered. Malone (2016) and Rixon, Lomax and O'Dell (2019), for example, note how adults tend to reminisce about their childhood in a way that can be both idealised and imagined. In relation to children's play, Holloway and Pimlott-Wilson (2018) challenge the way in which children's outdoor free play is often unconsciously romanticised and the vilification of more structured or supervised activities. Fattore, Mason and Watson (2016) highlight the importance of taking a child-centred approach to well-being when working with children, exactly because of the cultural aspects of well-being that can influence how it is perceived. Their work is informed by the child standpoint theory as used by Alanen and Mayall (2001), which uses the view that the less powerful members of society, in this case children, experience a different reality. Fattore, Mason and Watson's (2016) research found that there were three additional critical factors to children's well-being that do not tend to come up as strongly in research on adults: having power to assert agency and to make choices; a sense of security and safety; and a positive sense of themselves as people.

Taking a child-centred approach to the research, focussing on the present, rather than the past, ensures that children's current experiences are appropriately considered and that they are seen for what they are, which can often be positive and meaningful. As Christensen et al (2017) discuss in their study on children's mobilities in new towns in the UK, there is a risk that if too much focus is put on children's *immobility* then it can lead to the overlooking of children's existing everyday mobilities and what these mean to them. In their study, for example, they noted that the children in fact proved to be "intensely mobile."

The study is also reflexive in its approach. Much of the impetus and passion for the research and the methods used stem from my own experiences, partly as an urban planner but largely as a mother. Not only have these aspects of my life influenced my research, but they have also led to me being better informed in the contextual

aspects of what I am exploring. Having a personal interest in the outcomes means that I feel I have a deeper understanding of some of the concepts arising from my findings. However, I am also conscious of the fact that this is purely my viewpoint, stemming from my own life experiences and that how I understand the facts will be influenced by my own attitudes and knowledge. My approach has therefore been reflexive in order to give an authentic account of my findings, particularly with regard to my own status as a white, middle class female and as a mother of two young children (Luttrell, 2000).

The Study and Sample Details

The study focusses on children from three primary school case studies within Hackney, east London, England. I worked with small groups of five or six children from each of the schools. The children were aged between 9 and 10 years old and in year 5 at primary school, as this is around the age that children are considered to start to gain independence (Shaw et al, 2015; O'Brien et al, 2000; Matthews, 1992; Dodd et al, 2021).

The Research Setting

Hackney is one of 32 London boroughs and is located within inner London. It has one of the highest levels of deprivation in England (Ministry of Housing, Communities and Local Government, 2019b), as well as high levels of ethnic diversity, with around 40% of the population coming from Black and Minority Ethnic groups (Hackney Council, 2019). It also has high levels of inequality, which has likely been exacerbated by the recent gentrification of some parts of the Borough.

Hackney is a Borough with a recent history and interest in how children use their neighbourhoods. The current Mayor of Hackney, Philip Glanville, supports the idea of Hackney becoming a child-friendly Borough and the Council has recently adopted a child-friendly places Supplementary Planning Document (SPD), titled 'Growing up in Hackney' (Hackney Council, 2021). There is therefore some political support for such projects, which means it is more likely that the research may impact policy making and practice in the future. It is also a Borough that is committed to increasing levels of walking and cycling, with a current aim to increase the percentage of children walking to school from 65% to 70% (Hackney Council, 2015a).

Hackney was also chosen because I live there, meaning I already felt that I understood the area well and it was convenient for me to access. I was also able to use the links I already had to access schools in the area. I am mindful of the fact, however, that although I knew the area well this was only from my particular view

point and through my own eyes. It was therefore important also to take a step back to ensure that my own view point did not overshadow that of the children's within the study.

The School Setting

I worked with children from three schools from across Hackney. Schools with relatively small catchment areas were targeted in order to try to ensure that the children I worked with were from the neighbourhood surrounding the school. A number of schools in Hackney were contacted via e-mail to ask if they would like to take part. The three schools that were chosen were those that responded to the request and showed a willingness to be involved. This meant that, to varying degrees, the schools were already engaged with the idea of giving children more independence and encouraging freedom for children to use their neighbourhoods safely. The specific influence of the selected school's on the children's behaviours is discussed within chapter 8. Although all three schools were located in Hackney, all were located in slightly different neighbourhoods in terms of their demographics and levels of deprivation.

Six children in two of the schools were involved in the study and five children from the third school, so a total of 17 children were in this 'core group.' The children that took part in the study from each school were not randomly chosen, but efforts were made to ensure that a representative mix of children were involved. The headteachers from each school selected the children for me, based on some guidance from myself that I would like a mix of backgrounds and genders and ideally, children that lived near to the school. The children selected appeared representative of their class cohorts and were also measured against a whole class survey (as detailed further below).

Using schools as an access point to the children was an easy way to access a group of children of a similar age and from a similar area. It meant that the risk of not being able to obtain data or getting data from a particularly skewed sample was reduced.

However, I also recognise that the study taking place largely within the institutional setting of the school may influence the research process and my findings. As Fielding (2000) states, the setting of the school can influence how children behave and their moral codes, affecting what they are willing to say. I made efforts whilst working with the children to try to minimise the effects of this. Although all of the research was done within school time, much of it was not done within the school setting. Those parts of the research that were within the school were largely done with myself and the children only and without a teacher present, and so it is hoped that this made them feel free to say what they wanted. I also briefed the children on my role as a researcher, not a teacher. I tried not to come across as too authoritarian in my language or physical appearance and introduced myself on first name terms. When we were taking part in guided walks outside of the school, two of the schools allowed me to take pairs of children on my own and the other required a member of the teaching staff to be in attendance. This staff member was a teaching assistant who the children appeared at ease with and she made efforts to hang back behind us during the walks and not to get involved in the discussions.

Study Timing

The study took place during the Spring term of 2019, between January and March, with a further workshop session taking place in May of 2019 at the beginning of the school summer term. This time period is perhaps slightly unusual for a study on children's time outside and the majority of studies of this nature take place in the warmer and drier summer months. This schedule was intentionally chosen in order to explore the impact of the weather and the seasons on children's experiences. By conducting most of the research during the winter months, the further workshop session in May then allowed for some comparison of the children's movements and experiences and allowed us to discuss what had changed with regard to the seasons and to help to understand the children's connections to nature.

Main Methods

The study was designed using a mix of methods that were intended to enable me to better understand how children experience their neighbourhoods, by getting a feel for both their mobility and their freedoms within them and how they felt about these. I wanted to get an insight into the children's feelings and behaviours, but also to understand these in context and the way in I undertook the research reflected this. As noted in chapter 1, the term 'neighbourhood' was used loosely, allowing the children themselves to determined what this meant to them. No fixed spatial boundary was applied but it was intended to encompass those places and spaces that the children used frequently.

This mix of methods allowed the children to convey their knowledge in the way most appropriate to them. It also allowed for comparisons to be made between the data received from different methods, adding to the robustness of the findings (McKendrick, 2014). Although the design of the study was grounded in ethnography and methods based around experiencing, it also combined elements of enquiring and examining (adapted from Wolcott, 1994). Within this framework, experiencing methods are those that involve participant observation, either via interviewing or observing. Enquiring methods involve interviewing and obtaining primary data in ways that do not incorporate elements of observation. Examining methods relates to the examination of material created by others.

As Wolcott (2008) notes, participant observation and experiencing methods serve as the core activity for qualitative work and this was also the case in this study, mostly in the form of the go-along interviews. The study uses a predominantly qualitative range of methods, but is also supported by some quantitative data from both primary and secondary sources to further add weight to and to support the findings (Christensen et al, 2011).

A summary table of the methods used is shown in table 5.1.

	Experi	encing	Enquiring						Examining	
	Go-along Interviews	Neighbourhood Observations	Travel Diaries	Self-guided Photographs	Workshops and mapping	Whole Class Survey	Parent Questionnaires	Teacher Interviews	Neighbourhood Analysis	School Analysis
Where children go in their neighbourhood										
How children move around their neighbourhood										
Who with: parent, adult, friend										
Children's feelings of independence and autonomy										
Seasonality										
Parent and child perception of neighbourhood										
School policy, attitudes and influence										
Design and features of neighbourhood										
Parent and child attributes										

Figure 5.1: Table summarising the main methods used in the study

Experiencing

The experiencing elements of the study combined observational and participative approaches to enable me to best engage with the children. It is these methods that formed a core part of the study and are at the heart of taking an ethnographic approach.

The study began with an introductory session with the selected children (n=17) in January 2019. Separate sessions were held with each of the three schools. This was to introduce the children to the project and to the key concepts within it regarding

children's experiences of their neighbourhoods, as well as for them to get to know me and begin to feel at ease, enabling a more participatory approach in the later part of the study. I introduced myself as a researcher at this stage. I was unsure how the children would perceive me as a researcher and an unknown adult, but they appeared to feel at ease with me being there and were excited to hear about my time at university.

The session was useful to gain an initial impression of the children's thoughts and fears, as well as to get a basic understanding of their travel patterns and freedom and acted as a good start point for further discussions. The children were shown some pictures of children in public space, either playing or travelling, in order to elicit a response and to start a discussion with them on the topic and begin to hear their thoughts in the context of their own experiences.

Go-Along Interviews

Go-along interviews were a key element of the study, allowing me to both experience how children use their neighbourhoods as well as enquire about their use of the spaces. The walks took place during the school day and took place over the course of a number of weeks during February and March 2019, starting out from the school itself. These were set up to allow the children to take the lead and show me around their neighbourhood. It was emphasised strongly to the children taking part that it was for them to decide where we go and what we see, shifting the balance of power away from myself. I wanted them to show me what they knew about their neighbourhood, where they liked to go or where they didn't.

Although I had a broad set of questions I wanted to ask (see Appendix 1, these interviews were left fairly open-ended, partly to maintain interest from the children. The children proceeded in pairs to lead me around their neighbourhoods, with nine walks taking place in total, One child came along on two walks due to the odd number of children. One school required that a member of teaching staff come with us, but otherwise it was just myself and the two children. I asked the children

questions as we walked and we would sometimes stop to play or take photographs. This part of the research was not concerned with specifics about how far the children were allowed to go, but rather I wanted to get a feeling for their experiences of place and also to understand how well they knew their neighbourhood. Each walk lasted around 90 minutes and was audio recorded via Dictaphone and fully transcribed. I made efforts to keep the recording as discrete as possible, providing the children with a Dictaphone that was placed in their pocket and a small microphone clipped to their coat. Initially some of the children appeared distracted by this, but they all gradually settled down and the recording did not appear to affect the conversations that we had.

This method of the go-along interview has been shown to be a reliable way of collecting information from children about their neighbourhoods and this was found to be the case in this study too (Carroll et al, 2015; Christensen et al, 2011). It can provide a unique insight into a child's experiences that go further than a traditional interview. The method can help to balance the researcher-participant power dynamic (Carpiano, 2009), which is of particular importance when working with children, and it can help with enabling a participatory approach in which the children can steer the research.

Not only did the go-along interviews give the children the opportunity to show me the places that they go, but it also gave them the chance to talk to me about their experiences in a relatively informal setting. The children were able to talk and keep focussed for much longer whilst walking than they were when we were in a larger group in the classroom. Talking whilst on the move has been shown to yield additional insight into conversations, particularly in response to stimuli on the route and a sense of a shared experience (Cook, Shaw and Simpson, 2016). Walking and talking with another person reduces direct eye contact, allows sharing of the same visual field and gives participants the space and time to think (Lee and Ingold, 2006, Middleton, 2016). In addition, the go-along interview methodology does not rely on children's mapping abilities, which, as Matthews (1992) notes, can be variable and do not always demonstrate their full knowledge of an area.

During the go-along interviews, there was also an element of observation where, aside from other information I would gain from the children, I was also simply observing their behaviours and movements. A solely observational approach may have given me a sense of what children were doing at a slightly broader scale, but I did not feel that it would give me the in-depth understanding that I wanted to achieve. Emond (2005) notes how taking this wholly observational approach can be quite unsettling for children, risking the success of the study. A wholly participative approach, on the other hand, is very difficult when working with children. As an adult researcher, it would have been very challenging to be able to fully immerse oneself into the child's world and become unidentifiable as a researcher (Emond, 2005). The approach taken allowed for a balance between the two.

Neighbourhood Observations

In order for me to begin to understand the context of the children's experiences, I made sure to also spend time around the areas where the children lived before meeting with them to complete my own observations. At this stage, I did not know the exact area that the children might consider to be their neighbourhood, but I spent time exploring the streets and the buildings between the children's homes and schools to get a feel for these places and took photos of what I saw. These form an important part of my own observational analysis and helped to support my further analysis of the children's neighbourhoods.

Enquiring

Understanding how children experienced their neighbourhoods was important, but grounding those experiences in some more specific details and facts about the children's everyday lives was also relevant to the research, in order to provide a context for their experiences and to build up a story for each child.

Travel Diary

A form of travel diary (see Appendix 2) was used with the children in the first week that I worked with them in January 2019. Out of the core group of 17 children, all but one completed these. I asked them to make notes of the trips they made outside of their home and school over the course of a week, showing their mode of transport, who they were with and how they felt. They were also asked to mark on a map the routes that they took. This method of children's travel diaries has also been used in other studies both to explore the journeys that children take (McMinn et al, 2012; Zwerts et al, 2010) and how they feel about them (Westman et al, 2013). I chose not to try to measure the children's movements quantitatively, using a GPS device or similar though I note that in other studies comparing the use of both GPS data and travel diaries, some under-reporting of trips in the travel diaries has been found (Mackett et al, 2007). Yet although GPS data may have given a more objective measure of the children's movements, Christensen et al (2011) note how it is still open to interpretation and does not necessarily give an objective representation, ascribing no meaning to the data. I put the focus of the study, instead, in gaining an understanding of how the children perceived the journeys and experiences that they told me about.

The diaries were piloted with children of a similar age before being used in the study. They gave a good insight into the children's movements over a week long period and allowed me to bring together what I would later experience with them on the goalong interviews with this knowledge of their actual travel and movement. In order to understand how their movements had changed when I revisited the children in May, I brought the children's diaries back to them and asked them to tell me what, if anything, had changed in their daily routines.

Self-Guided Photographs

Alongside the travel diaries, each of the children in the core group of 17 were also given a camera to take home for a week, to take self-guided photographs of some of the places that they had visited in their neighbourhood over that period. The idea of this was to collate some visual data on the children's experiences, as well as to help

them to further engage with the topic. This again enabled a more participatory approach within the study. I had planned for the photographs to be used later on in the study to help to generate discussion around some of the features that they had chosen to capture and to better understand what the photographs meant to the children. Self-directed photography has been used in other studies of children's environment and provided useful insights (Young and Barrett, 2001). Buss (1995) has also highlights the importance of understanding the context of the images taken. In the end, this was not possible due to time constraints but they were still helpful in engaging the children with the project. I believe that this helped to strengthen the insights that came out of some of the other methods used.

Workshops and Mapping

I led two one hour workshops with the core group of children in each of their three respective schools. The first was shortly after I had completed the go-along interviews in February and March, and the second was held in May at the start of the school summer term. The first workshop allowed me to go further in depth with the children about their experiences as well as to question anything that wasn't clear to me from the interviews. Much of the data collected acted to back up and reinforce insights that had already been gained from the other methods.

I asked the children to mark on a map the places that they were allowed to go with and without an adult in order to back up some of the findings from the walks (see figure 5.1). They were also asked to mark-up locations where they knew friends and family, plus places in their neighbourhood that made them worried or afraid. I then had a discussion with the children on the topics of safety and crime, and play and risk, in order to pull out some of the themes that had come up throughout many of the walks and to better understand their thoughts on these.



Figure 5.2: Example of a marked up map from the workshops

In the workshop in May, the discussion was more focussed around the natural environment and what had changed since our previous meetings earlier in the year. The children drew pictures for me showing the changes between the seasons (figure 5.2) and this is when I showed them their diaries from earlier in the year and questioned what had changed. We then spent some time in the school playground, where I was able to talk to the children more about the changing seasons and to help them think back to the walks we did in the winter. I used this opportunity to ask some further questions about school attitudes and policies.

In this session, children also responded to written questions in relation to their home and family, to help me better understand their social class and how content they were with their freedoms at home and at school. As part of this, they were also asked to list their favourite five places in their local area (see Appendix 3). This was

to intended to provide some clarity around these topics, based on gaps in findings from some of the earlier parts of the study.



Figure 5.3: Example of one of the children's drawings of the seasons

As there were only five or six children from each school taking part in the workshops, this allowed for fairly detailed and focussed discussions, which helped me to understand how their behaviours were shaped and by whom. Working in groups can help children to feel more at ease and can therefore be better for encouraging active participation (Mauthner, 1997). The risk of group discussion, however, is that power relations between children may influence the discussion, with those more confident at speaking dominating. I was aware of this happening in some instances and tried to manage this as best I could, but I am conscious that some children dominated these group discussions more than others.

Parent Questionnaires

Although not a key part of this study, it was felt important to try to get a sense of the views of the children's parents and their decision making around the children's travel and play in their neighbourhoods. All parents of the core group of 17 children involved in the study were requested to complete an online questionnaire (see Appendix 4).

Questions related to the children's travel and play behaviours in their neighbourhood, as well as parental controls and concerns regarding safety and freedom. These drew on questions used by Shaw et al (2015) in their international survey on children's independent mobility. It was intentional that some of the questions in the parent questionnaire replicated the data that was likely to have already been collected from the children. This was in order to build up a more robust picture and also to allow consideration of any variances and reasons for these.

Crawford et al (2017) note that it can be challenging to recruit parents in school-based research and this was also the case in this study. Just nine of the parents completed the questionnaires, but those that did still provided some additional insight.

Whole Class Survey

It was felt important to understand how the group of children that I was working with on the study reflected patterns of neighbourhood mobility within their class cohorts, to understand if their mobility patterns appeared reflective of this wider group or not.

The children's whole classes (n=156) completed a written questionnaire with some guidance from myself, which asked questions on the use of their neighbourhood for travel and play (see Appendix 5). The questionnaire was written using simple language that the children would readily understand and was also tested with similar aged children for understanding before being distributed, drawing on guidance from Bell (2007). It questioned their feelings of autonomy and independence and how they

felt about the opportunities in their neighbourhood. The intention of these questions was that they would replicate some of the insights that I had gained with the groups of children I had worked with, albeit going less in-depth.

These questionnaires were completed after the majority of the other research had taken place, so that I could use any previous insights to inform these if necessary. Scott (2008) notes the benefits of this timetable, with the earlier in-depth participation effectively working as a form of pilot study, to test understanding of terminology and to allow future questioning to be guided by any impressions drawn.

Teacher interviews

Further enquiry was also made with one teacher from each of the schools in the form of a 30 minute semi-structured interview. This was set up to better understand the policies of the school around travel, play and independence and to start to build a picture of how this might influence children's experiences and behaviours. This was in a more structured format than some of my discussions with the children, as the purpose of the interview was not to specifically understand the behaviours of the teachers, but rather to comprehend the school's overall view and stance on elements of the children's own behaviours and to then explore how these effected the children.

Examining

The study incorporated a number of other elements that began to explore and unpick the other potential influencing factors on the children's behaviours and use of their neighbourhoods, using an examining approach.

Neighbourhood Analysis

In addition to the more exploratory nature within my observational analysis of the children's neighbourhoods, I completed further analysis of each neighbourhood. Factors relating to the built environment of the area were noted and a desktop analysis was completed, considering socio-demographic features and some

historical elements of the neighbourhoods, in order to begin to understand the full context.

School Analysis

In order to fully understand the context in relation to the children's school, a desktop analysis of the history of the school and some of its existing and past policies was completed. This involved exploring each of the school's websites and the policies held on these, to understand the background of the school and its current ethos. It was also possible to ascertain the current demographic of each school from recent OFSTED reports and if there had been any relevant changes to any of the schools in recent times in terms of leadership. This helped to build up a stronger picture and helped to complement the information obtained from the teacher interviews. The information gained from this is reflected in the school description in chapter

Summary

The elements of experiencing within the study most strongly linked to an ethnographic approach, but were supported by other methods that helped to be able to further enquire about the children's lives and to understand the context better through examining the data I had collected. This mix of methods helped to support the development of a detailed picture of the children's lives. With the aim of the research being to better understand elements of children's everyday lives and experiences, it seems to makes sense that the way in which the data is collected is based around these principles, with an aim of understanding what is driving their behaviours and how they feel about their actions (Pile and Thrift, 1995).

Analysis

The data collected from the various sources was analysed in a variety of ways. The qualitative data collected from the go-along interviews, teacher interviews, workshops and initial area observations were transcribed verbatim. The data that the children provided in map form was transferred onto maps digitally to make it easier to use and visualise. The photographs from the children were categorised and I assessed the contents of them and tabulated them to help to support any later thematic analysis.

Alongside some of the information collated from the go-along interviews and workshops, the information from the diaries that the children completed, plus some of that from the whole class questionnaires and parent questionnaires, was used to create a table of data for each child, creating a summary of their overall responses. This allowed me to start to develop a profile for each child within the study and helped to create a broader picture of each child's life, bringing together all the relevant aspects of data that had been collected. This process was helpful in starting to think about comparisons and contrasts between different children or different groups of children.

A thematic analysis was completed to pull out the key themes from the data. The themes used to initially code the data related to independence, autonomy, the natural environment, attitudes to risk and crime, social capital, feeling happy and content, personal characteristics, the built environment and school, as shown in figure 5.2. They were developed using a predominantly inductive approach, using the specifics of the data to draw out the most common themes. Whether or not these came up as positive or negative influences on the children's experiences was also coded in some instances.

Main Theme	Sub-theme
Independence	Positive
•	Negative
	Change
Autonomy	Positive
	Negative
	Change
Happy/Content	Positive
	Negative
Natural environment	Relationship with outdoors
	Relationship with nature
	Darkness
Built environment	Traffic
	Shops
	Play spaces
	Community Facilities
	Distance to places
School	Positive
	Negative
Attitudes to risk and crime	Risk
	Crime and Safety
Social Groups	Positive
	Negative
Friends and Family	Positive
	Negative
Personal Characteristics	Social Class
	Siblings
	Parents
	Gender
Length of time in neighbourhood	
Knowledge of neighbourhood	

Figure 5.4: Table showing the codes and sub-codes used in analysis

This initial coding and analysis was then developed further using strategies similar to interpretive description (Thorne et al, 2004) to generate a deeper understanding of the realities of the children's lives and to help to develop the key themes within the data. The analysis took on an iterative process, as the original themes and codes were reviewed and further insights drawn from these. This process of interpretive description aims to produce a:

"coherent conceptual description that taps thematic patterns and commonalities believed to characterize the phenomenon that is being studied and also accounts for the inevitable individual variations within them" (Thorne et al 2004, 4)

Some of the data collected was used more than others in the final analysis and write up of the findings. The go-along interviews were a particularly significant element of the overall analysis. Other elements of the data played a less significant role. The teacher interviews, for example, were used in the analysis in relation to the influence of the children's schools, but did not play a role in exploring how the children used their neighbourhoods. The parent surveys were used at some points in the analysis to back up some of the findings from the children, but in the end were not used significantly, partly due to not all parents responding to these. This triangulation of methods was still useful, however, to enable the most relevant aspects of the data to be understood.

As will be highlighted throughout this thesis, the realities of the children's lives were complex with many individual differences and this method of analysis reflects this. There were no pre-conceptions around what themes may arise as most relevant or what insights that data might provide and the data was constantly questioned in this iterative process of analysis. The initial coding of the data was useful in sorting the data at that stage, but it was the later reflections on this and the stories coming out of the data that were ultimately used to interpret it in the way that is presented here.

Ethical Considerations

Ethical considerations are an important part of any research, and particularly of research working with children (Matthews, 1998). Although this may have led to an element of formality at the start of the research with the children, gaining informed consent from both the children and their parents or carers was an important part of ensuring that the research was conducted appropriately.

Written parental consent was requested for each child taking part. I recognise the importance of this, but I am also mindful of the fact that it is elements in the research process such as this that shift the focus away from the child to adults again. In addition to this therefore, the nature of the research was clearly explained to the children and what their involvement would be in this. I ensured that this was well understood by them before asking if they were sure they wanted to take part. Children were also given the option to opt out of the project at any time. It is accepted that the institutional context of the project may have led to children feeling they could not opt out as it was part of their school day (Pole, Mizen and Bolton, 1999). It was therefore emphasised to the children that that this was not the case, and that there would be no penalty if they chose to return to their normal classroom activities, though none of them did. Overall approval for the study was obtained from the individual head teachers before the children were selected.

Anonymity of the children was carefully considered in the design of the study. It was decided that pseudonyms would be used for the children's names so that they were not identifiable. The names of the schools have also been changed to make them harder to identify. Street and place names have not been included on maps, though they have been referred to in the text. The exact locations of children's homes have not been identified. Any photographs that may identify a child have not been used to present the findings.

For the whole class questionnaires, where all children from the class completed a written questionnaire, negative consent forms were handed out to the children to

take home to their parents. These asked that if the parents were not happy for the child's data to be used, that they return the form to school, though none did. These completed questionnaires were anonymous, aside from those for the children in the study group.

CHAPTER 6: Case Studies and Participants

The three schools that took part in the project and the neighbourhood surrounding them form the three case study areas. These areas surrounding each of the schools are where most of the children in the study lived and spent their time. The boundaries of these neighbourhoods are loosely defined, but the following descriptions will give a sense of the characteristics of each area and their similarities and differences.



Figure 6.1: Map showing Hackney's location in London (adapted from Nilfanion, 2021)

It is important to note that the boundaries and descriptions of these areas are defined based on the children's home locations and their school. As will be discussed later, these do not necessarily match with the children's activity spaces

and the areas that they roam and some of the children will spend time outside of these neighbourhoods.

All three of the case study areas are located within the London Borough of Hackney, identified in figure 6.1, but demonstrate a range of neighbourhood characteristics, indicative of the varied nature of the Borough and of this part of London as a whole.

Oakley School

Oakley school is located towards the centre of Hackney and all of the children involved in the study lived fairly close to the school, no further than one kilometre away, but with many much closer, as shown in figure 6.2.



Figure 6.2: Map of the neighbourhood around Oakley school

The main road, Well Street, cuts through the area and runs in front of the school. The building typologies are relatively varied in the area directly surrounding the

school. To the south of Well Street, is a mix of older terraced house and newer build housing of varying typologies and density, in a mix of smaller developments, with the tallest building at four storeys. To the north of Well Street is mostly taken up by the Frampton Park estate, a post-war social housing estate. It is made up five and six storey blocks with pockets of green space in between.

Well Street and Mare Street are the main roads in the area and feature a range of shops and services. There is also a small shop located within the Frampton Park estate. Well Street Common, Victoria Park and London Fields are large parks that are all relatively close to the area. Hackney Central, with its wider range of shops and services and Hackney's main library and town hall, is approximately one kilometre away.

In terms of getting around, many of the residential streets are relatively quiet and walkable. The streets through the Frampton Park estate are traffic calmed and a recent modal filter placed on Frampton Park Road has reduced through traffic on this road. There are a number of bus routes passing through the area. London Fields rail station is not far away, though none of the children mentioned using it.

The area around the school and where most of the children live crosses the boundary of two wards, Victoria and Homerton, so it is difficult to provide an accurate picture of the population in the area directly surrounding the school. Victoria ward has proportionately more white British residents than Hackney as a whole, whereas Homerton ward has fewer white British residents, more Black African and Caribbean and is generally more ethnically diverse (Hackney Council, 2015b; 2015d). The percentage of social rented housing is higher than the Hackney average in both wards. When measured by the indices of multiple deprivation, the area around the school and where the children live comes out as one of the 10-20% most deprived areas in the UK. (Ministry of Housing, Communities and Local Government, 2019a)¹. With regard to crime, levels of crime fall within some of the worst in the UK and

_

 $^{^{\}scriptscriptstyle 1}$ Based on LSOAs 022B (in 20% most deprived) and 019E (in 10% most deprived), which broadly cover this area.

within the lowest 10% (Ministry of Housing, Communities and Local Government, 2019b). Many of the children in the study lived on the Frampton Park estate, which was known in the past for problems with gangs and criminal violence.

Oakley school itself is located on Well Street, though children access it via an entrance on a side street. The majority of the pupils attending the school appear to come from quite a tight local area, although this has expanded slightly as the school has grown from two to three form entry. The headteacher told me that there was a preference from those children in and around the Frampton Park estate to attend, with those children living south of the school and near Well Street Common choosing to attend other schools. The school has always been rated as either 'good' or 'outstanding' by Ofsted. The majority of pupils at the school are from minority ethnic backgrounds (Ofsted, 2014) and speak English as a second language (Ofsted, 2014). A higher than average number of pupils (39%) receive pupil premium funding at the school (Orchard Primary School, 2019). I was not able to source any overall school figures on how children travel to school. Based on the whole class survey I did with the children as part of the study, 86% of pupils in year 5 travel to school either on foot or by bike, with just 5% travelling by car. This was evidenced in observations at school drop off and pick up time too, where the majority of children appeared to travel on foot.

Three of the children in the study from this school lived in flats on the Frampton Park estate itself, and the other three lived relatively close by:

- Maya: girl, black African, religion not known, working class, lived in ground floor flat on the Frampton Park estate with both parents and her older sister
- Melis: girl, Turkish, Muslim, working class, lived in upper floor flat on Frampton Park estate with her parents, one older brother and one younger brother
- **Eva:** girl, black African, Christian, working class, lived in a maisonette next to Frampton Park estate with her mother, no siblings

- Warren: boy, white British, religion not known, working class, lived in upper floor flat on Frampton Park estate with both parents, one older brother and two younger brothers
- Ashok: boy, Asian, Muslim, working class, lived in upper floor flat next to
 Frampton Park estate with both parents and one younger sister
- Henry: boy, white British, Christian, middle class, lived in two storey house on terraced street slightly further from school, with both parents and his older sister

Wigmore School

Wigmore school is located in an area of Hackney called Stoke Newington, in the north of the Borough. All of the children involved in the study from this school came from a relatively small area no further than one kilometre away from it, as shown in figure 6.3.

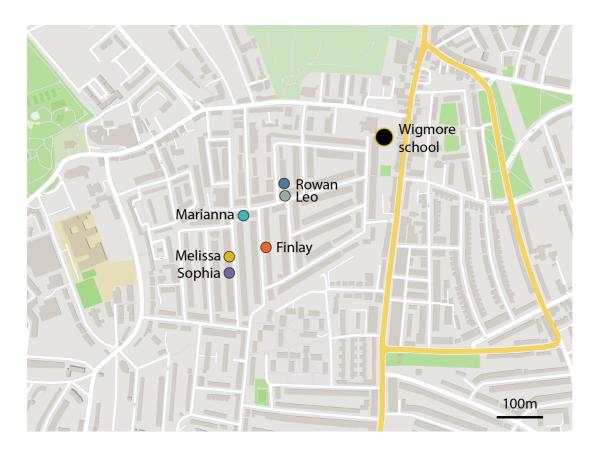


Figure 6.3: Map of the neighbourhood around Wigmore school

Many of the streets in the area are Victorian terraced streets and these are where all of the children involved in the study lived. These streets are relatively tight knit streets, with buildings all at two storeys high. There are also some pockets of newer housing in the area, generally built as social housing and these buildings are mostly three storeys high, with some reaching to four storeys but no higher than that. The school building itself, at four storeys, is one of the tallest in the area. The streets that the children lived on appeared fairly quiet. There were a couple of local convenience

stores within the block of streets where they lived, as well as a cafe, pub, hairdresser and art shop.

There are two main roads running through the area. Stoke Newington High Street and Stoke Newington Church Street are both fairly well trafficked roads and feature numerous shops and services along them. Clissold Park is a large park located within walking distance of the children's homes. Abney Park, a historic cemetery is also located nearby though both parks require crossing Stoke Newington Church Street to access them. Clissold leisure centre is also located close by, near to Clissold Park. Aside from the main parks, there are not many smaller scale green and public spaces. Kynaston Gardens provide a small pocket of green in the area near where the children live. There is also a ball court on the Hammersley Court estate to the west of the terraced streets. Otherwise though, the majority of outdoor space in the area is made up of private gardens. In terms of getting around, many of the local streets appear walkable. There are a number of bus routes running along the main roads, and Stoke Newington train station is located approximately half a kilometre from the school, though none of the children I spoke to ever mentioned using the train.

The ward that the children's homes and school are located within is slightly less diverse than the rest of Hackney, with proportionately more white British (45%) and a lower proportion of children than the rest of Hackney (Hackney Council, 2015e). Residents are generally in better health than the rest of the Borough and the ward is one of the least deprived in Hackney, although still within the 20% most deprived wards in England (ibid). Home ownership levels are higher than the Borough average (35% versus 24%). With regard to crime, the ward also fares better than other parts of Hackney and the Indices for Multiple Deprivation show it sitting in the second or third decile for crime in the UK, compared to Hackney as whole which is ranked 17th (Ministry of Housing, Communities and Local Government, 2019b). The school itself is located directly on Stoke Newington Church Street, although the children can enter the school from one of the residential side streets. The school is two form entry, with two classes per year and the children are not required to wear

school uniform. The school appears to be well regarded locally and received an 'outstanding' rating at its latest Ofsted inspection in 2012 (Ofsted, 2012). In terms of the school's diversity, the proportion of pupils from minority ethnic backgrounds is well above the national average, though there are less white British than the ward average, at 35% (compared to a ward average of 45%). Those eligible for support through pupil premium funding is below the national average at 16% (Wigmore School, 2019). This is surprising given the overall levels of deprivation throughout the ward, and perhaps reflects the catchment of the school and the types of families that it attracts.

The majority of pupils at the school travel to school either on foot or bike (94%), with just 5% stating that they travel by private car and 2% by public transport, as ascertained in the teacher interview. This is similar to the results of the survey done as part this study with all year 5 children, where 86% of children stated that they walked or cycled to school.

The children that I worked with on the project from Wigmore school all lived on the nearby terraced streets, in two storey houses with private gardens. All of the children lived within a short walk from the school.

- Melissa: girl, white British, religion not known, middle class, lived in two storey terraced house with both parents and younger sister Sophia: girl, white British, religion not known, middle class, lived in two storey terraced house with both parents and younger sister
- Marianna: girl, white British, religion not known, middle class, lived in two storey terraced house with both parents and older sister
- Rowan: boy, white British, religion not known, middle class, lived in two storey terraced house with both parents and one older and one younger brother
- Leo: boy, white British, religion not known, middle class, lived in two storey terraced house with both parents and older brother

• **Finlay:** boy, white British, religion not known, middle class, lived in two storey terraced house with both parents and no siblings

Mansfield School

Mansfield school is located in the Lower Clapton area of Hackney, in the north eastern part of the Borough and not far from Hackney Central. The children involved in the study came from a variety of addresses surrounding the school, as shown in figure 6.4.

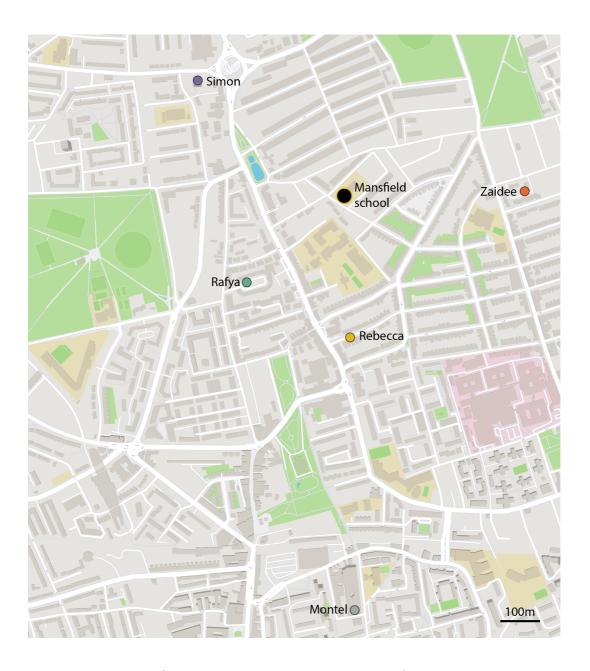


Figure 6.4: Map of the neighbourhood around Mansfield school

The school is located within a residential area, and the area directly surrounding the school is dominated by Victorian terraced streets. The nearest main road to the school is Lower Clapton Road, which has a number of shops and facilities on it. On the other side of this road from the school, there is more of a mix of building typologies in evidence, with some newer building and flats in addition to some further terraced streets. Most of the buildings in the area are a maximum of three storeys, with the obvious exception being the block of flats on the corner of Lea Bridge Road and Lower Clapton Road, which is 17 storeys high. Away from the main roads, most of the roads are relatively quiet and free from traffic, partly due to measures to reduce through traffic through the residential areas.

Lower Clapton Road is to the west of the school and features a range of shops and facilities. In addition to this, Chatsworth Road is to the east of the school and also features a similar range of local services. There are no other local shops in direct vicinity of the school. Both Mansfield Park and Hackney Downs are large local parks roughly equidistant from the school. Clapton Square is a smaller local park to the south of the school. Aside from these open spaces, most of the other open space in the area is used as private gardens. The small Chatsworth estate just off Chatsworth Road also features a small area of grass and some play equipment. Buses run along both Lower Clapton Road and Chatsworth Road. The nearest train station to the school is Clapton station, which is approximately one km away. The area of Hackney Central, with its wider range of shops and facilities is not far away, and is approximately 1.5 kms from the school.

The ward that the school and most of the children's homes fall into² or are in close proximity has a slightly different ethnic mix to other parts of Hackney, with proportionately more Indian, Pakistani, Bangladeshi and black Caribbean residents, and fewer black African and white residents than the Borough average (Hackney Council, 2015c). There are proportionately more home owners and fewer social

-

² Lea Bridge ward was used for this analysis

renters, and high numbers of private rented (Hackney Council, 2015c). The area falls within the 10-20% most deprived in the UK³ (Ministry of Housing, Communities and Local Government, 2019a) and also falls with the lowest decile with regard to crime (Ministry of Housing, Communities and Local Government, 2019b).

Mansfield school is a relatively large school with three classes per year. It is located off the main road in a predominantly residential area. It is currently rated by Ofsted as 'good' and prides itself on being a UNICEF Rights Respecting School. The school is ethnically diverse and appears to reflect the population of its catchment area. 29% of the pupils at the school are white British, with other children from a range of backgrounds including a significant number of Turkish, Black African and Caribbean children. 27% of the school's pupils are eligible for pupil premium (Millfields Primary School, 2019). Although the majority of the children at the school appear to come from the terraced streets in the vicinity of the school, given the school's size the catchment area spreads further than this and children also attend from further afield (The Good Schools Guide, 2020).

The majority of the pupils at Mansfield school walk or cycle to school (85%), with just 7% stating that they travel by car and 5% by bus in school's own travel survey. This is similar to the results of the survey done as part of this study with all year 5 children, where 88% of them stated that they walked or cycled to school.

The children that I worked with on the project from Mansfield school all lived in slightly different areas surrounding the school.

- Rebecca: girl, white British, religion not known, middle class, lived in two storey terraced house with both parents and younger brother
- Rafya: boy, Moroccan, Muslim, working class, lived in second floor flat with both parents

_

³ Based off 2019 IMD figures and LSOA 011C (20% most deprived), 011D (10% most deprived), 010F (20% most deprived)

- **Simon:** boy, white Eastern European, religion not known, working class, lived in upper floor flat with mother
- Zaidee: girl, mixed Black background, religion not known, working class, lived in third floor flat with mother
- Montel: boy, black African, religion not known, working class, lived in upper floor flat with both parents and older brother

CHAPTER 7: Children's Mobility, Activity Spaces and Independence

The next two chapters bring together the main findings from the study, and these are then followed by a discussion chapter, which explores some of the key themes raised in more depth.

Chapter 7 focuses on the broader themes that have come out from the study in terms of the children's overall neighbourhood mobility. The first section of this chapter provides insights into how the children got around and their overall levels of mobility. This is not something that was specifically incorporated in the initial thematic analysis, but it was felt important in order to 'set the scene' for how the children got around and used their neighbourhoods. The second part of this chapter then looks more at how the children's lives were structured and their use of time. In this section, the concept of autonomy is explored and the inter-relationship between structured or unstructured time and autonomous or controlled time is considered. This stems from the early thematic analysis that considered these concepts. It links to how the children got around their neighbourhoods and their modes of travel, but also brings in considerations of the children's use of space for other purposes, such as play and socialisation.

Given that a key focus of the study was to explore children's mobility in the winter months, the third section of this chapter explores children's mobility throughout the year and builds on the first two sections to start to understand what might change and what might stay the same with the children's mobility in the summer and winter months. This also links back to the early thematic analysis, which incorporated consideration of the natural environment. This chapter then moves on to consider children's activity spaces, stemming from the initial thematic analysis, which considered how far the children had to travel to places. It challenges the notion that a larger activity space is necessarily better and also links this back to considerations of

autonomy and independence. Discussions on independence are then brought together in the final section of this chapter, where the children's gradual development of independence is discussed. This begins to unpick the relevance of this in children's lives and how it can be best understood when thinking about children's neighbourhood mobility. It develops understandings around how children explore and transition towards independence and autonomy in their neighbourhoods.

Chapter 8 follows on from this chapter by focussing in on the specific impact of the built environment on children's neighbourhood mobility, this being a main focus of the study. In the initial thematic analysis, this was considered in terms of the different types of space that children might visit, but is developed further in this chapter, splitting the spaces that children use into three types of 'third place.' This links to discussions in chapter 7 on how children used space, but relates it more closely to the design and influence of the built environment upon this. This chapter also considers the influence of the school. School is an important physical feature in a child's neighbourhood and its location can have an influence on children's mobility, as is discussed.

Mobility and Modes of Travel

Although children's mobility is more than just about getting to and from places, understanding how they make the more repetitive journeys, such as the trip to school and the transport modes that they use for this, can help to begin to build a picture of their daily routine. This can also help to better understand how the various transport modes support children to connect to their neighbourhoods. There is evidence to suggest that it is these regular journeys that create the habits that then impact on other elements of children's mobility (Middleton, 2016).

All of the children in the study and the schools that they attended were located in the high density, inner London Borough of Hackney. This context is important to remember when considering the children's choice of transport mode and travel patterns. In comparison to the rest of the UK, which reports an average of 47% of children aged 5-10 walking to school (Department for Transport, 2019), there was a relatively high percentage of walking within all three of the schools involved in the study (and no significant differences between them in this regard), even during the winter months when most of the study took place. 79% of the children from the year 5 classes that were surveyed from the three schools stated that they walked to school and all but one of the children in the study groups walked. Similarly, 95% of the children in the year 5 classes that were surveyed stated that they sometimes walked to where they play.

Walking

The relatively high levels of walking within the school classes were reflected in the experiences of the children in the study. All of them walked to most of the places that they spent time in within their neighbourhoods and all but one of the children usually walked the journey to and from school. Although many of the children's families had access to a car and there was reasonably good public transport accessibility where all of the children lived, walking was always the primary means that they got around

within their local area. Connectivity on foot tended to be better than public transport for these short journeys and usually comparable or better to travelling by car. As will be discussed in more detail in chapter 8, there were also a number of pedestrian only routes, plus footways and crossing points across the roads where needed. Melis (Oakley), for example, talked about how, although her family owns a car, her preferred method of getting around was by walking, because she liked it and it was good for her.

"I walk a lot even though we have a car. I walk all the way to Dalston and I come back."

The children in the study knew their close neighbourhoods well and most were able to navigate confidently around their local area when they took part in the go-along interviews. Many of the children showed a confidence in navigating their way around the places that they knew, even if most of their time in their neighbourhoods was spent with an adult. What appeared to be the most important in terms of the children's knowledge of their neighbourhoods was not if their spent time in the neighbourhood was with an adult, but having the opportunity to navigate around it on foot.

Melissa (Wigmore) was generally not allowed out in her neighbourhood unsupervised, but she spent a lot of time during her daily routine walking to different activities within the local area. She demonstrated a good spatial awareness during the go-along interview and was able to navigate around confidently. Simon, conversely, had less frequent regular trips that he would do in his neighbourhood, as he took part in fewer activities and was not allowed to spend time in the neighbourhood on his own. His neighbourhood knowledge was much poorer and he struggled to navigate around it.

The children's experiences of their neighbourhoods appeared enriched by the amounts of walking that they did. Although some of this walking was with an adult, these trips on foot still helped the children to develop a sense of control. The children

demonstrated that even when walking with an adult, they could learn to navigate around their neighbourhood and have some control over both the route that they took and the speed that they travelled at. In the go-along interviews, many showed a confidence in navigating their local area and choosing routes. This is important to consider when comparing walking over other possible transport modes.

Cycling

Cycling is another mode of transport that offers children an opportunity to have some control over their trips, whether travelling with an adult or not. Yet although many of the children in the study had access to a bike, none of them told me that they used these to regularly get around for travel purposes. This was also the case for their peers. When responding to the whole class survey, just 8% of children stated that they cycled to school. It was only Leo (Wigmore) and Melissa (Wigmore) from the study who mentioned using their bikes for travel. Leo noted how he would sometimes cycle to his swimming class with an adult. Melissa would sometimes cycle to the local junior parkrun (a weekly 2km timed run), a travel mode choice that appeared to be driven by her mother's environmental views, as she described:

"No we cycle because my mum insists ... we don't have a car anymore. But if my dad's taking me to Highbury Fields he normally gets a taxi because he can't be bothered."

Melissa described how she would cycle on the road but that her father would always be next to her. It was this perceived need to always have an adult accompanying them whilst cycling that appeared to restrict the trips that some of the other children made by bike. Rebecca owned a bike that she locked up with the rest of her family's in the bike locker on her road. When I asked her if she used it she told me:

"Not really because I have a bike that's really, it fits me, but we never have time anyway to go on bikes, to have a bike ride."

Rebecca implied that she would only consider going on her bike together with her family and it was this factor that was restricting her use of it. In terms of her trip to school, for example, she walked to school with friends and without an adult and it did not seem that she would have felt confident doing this if travelling by bike. Zaidee told me that she would sometimes cycle to places in her neighbourhood, but that it would be with her mother walking alongside as her mother did not own her own bike. Again this need for accompaniment and that the fact that her mother could not cycle with her restricted her own ability to cycle.

Unlike walking, where many of the children walked in their neighbourhoods on their own and perceived it as being safe when using the footways, there was not a similar level of infrastructure provision in their neighbourhoods for cycling, and the children would have either had to cycle on the footway or directly on the road in most instances. Although the children were able to negotiate the road networks and feel safe when walking using footways and crossing points, these were designed with people walking in mind and any signals that it was also ok for cyclists to use these were not clear. It is likely that this played a part in the children feeling that they needed to be accompanied when cycling, although this was not explored in depth within the study. The children expressed frustration if they were not allowed to walk in their neighbourhoods on their own, but there was a general acceptance that they would always need to be accompanied when travelling by bike. In spite of this, there was clearly some demand for cycling from the children's peers in their classes, with 38% of those who walked to school from the whole class surveys stating they would like to cycle to school.

A number of the children within the study group did use their bikes for playing and this was also the case with their peers in their classes, with 38% of the children from the whole class survey stating that they cycled to where they play. The children would tend to use their bikes if they had a space outside of their home, which they could use them on and feel safe. Both Rafya and Montel talked about having races on their bikes just outside of their homes and appeared to enjoy this.

Public Transport

Public transport accessibility for the children in all three neighbourhoods was good, with public transport accessibility levels (PTAL4) measured as 4-6 in and around where the children lived from Oakley and Mansfield schools. For the children at Wigmore school, the PTAL was slightly lower, between 3 and 5, due to the area being further away from a train station. Although these PTALs give a broad indication of what public transport was available, they don't necessarily indicate how the children perceived accessibility by public transport as this largely depended on the specifics of the journeys that they needed to make, but it shows that there was public transport available, should they want to use it.

There was just one child in the study, Montel (Mansfield), who used public transport to travel to school. Montel would frequently take the bus to school as he lived a further distance away. Having moved home a number of years earlier to a different part of the Borough, taking the bus was quicker for him than walking. Just 3% of the children in the whole class surveys stated that they used public transport to get to school.

Other trips on public transport by the children in the study tended to be for journeys slightly further afield and what they would consider to be outside of their neighbourhood, and they would take these with a family member. They would choose to take public transport when it was too far to walk and or it was quicker than walking. The levels of public transport accessibility were therefore important in determining which mode the children would use as choices were largely about efficiency. Maya talked about going on the bus to her cousin's house, which was further afield outside of the Borough. In his travel diary, Rafya noted a number of trips that he used the bus for, where they were deemed slightly too far to walk. He

⁴ As measured by Transport for London, data available at https://tfl.gov.uk/info-for/urban-planning-and-construction/planning-with-webcat/webcat

would always take these trips with his mother and they were usually for a family event or occasion.

Those children whose families owned a car were less likely to take public transport and would more likely use the car for these trips instead. This was also evident in the travel habits of the children who had only one parent that drove and so had access to a car just some of the time. Although Rafya stated he would travel on the bus with his mother, for example, who did not drive, if he was with his father, he would always use the car. Similarly, Marianna stated that she would use the bus with her mother who did not drive, but would go in the car if with her father. There was therefore some interchangeability between public transport and car trips, which both tended to be used for longer journeys.

Car

None of the children in the study frequently travelled by car, but 12 out of 17 of them did have access to a car and would infrequently use it. This infrequent use of cars for travel was also reflected in the whole class surveys, where just 4% of the children who responded stated that they travelled to school by car. Although the details of the children's journeys by car were not explored in detail, it was clear that children would tend to travel by car mostly to save time and when it appeared more convenient, which was usually for trips that were not considered to be within easy walking distance, given that walking tended to be seen as a convenient mode of travel for short trips. This was a similar pattern as seen for the children's use of public transport.

In a dense urban area, short journeys by car are not necessarily quicker or more convenient than walking and this is reflected in the journeys that children described using a car for. For them to travel by car, there were a number of relevant factors. In the first instance, the child's parent needed to have access to a car. If this was the case, then the choice to use the car appeared to depend on the urgency of the journey and the weather conditions. If the child was travelling to an organised activity

or club that began at a certain time, then there seemed to be a higher likelihood that the car would be used as it was perceived as being quicker, as demonstrated by Leo (Wigmore) and Sophia (Wigmore).

"I normally drive to my music, which is really close at Stoke Newington school but normally it's either really raining or we would be late if we didn't."

"unless my parents are rushing and then we'll take the car"

In some instances the children also had regular routines to travel to these activities by car. Every weekend, Sophia attended an ice skating class that was around two miles away and this was a trip that was always done in the car. If connectivity by car had been poorer or the distance to the facility was less, then she may have chosen a different mode or perhaps even chosen to attend an activity closer to home. If the weather was poor, there also seemed to be a higher likelihood that the car would be used, as shown by Rowan (Wigmore).

"I drove a couple of times to swimming but only because it was really rainy or my mum was letting us. But you can barely ever find parking."

When the children needed to travel outside of their neighbourhood a longer distance, those who had access to a car were likely to use it if the trip was not deemed possible to walk, and in these instances they never mentioned considering using public transport instead. What was an appropriate walking distance varied from child to child. Warren (Oakley) talked about visiting his family outside of London in the car and Montel (Mansfield) would only travel in his car to go to the supermarket on the edge of the Borough. Rowan (Wigmore) commented that some of his friends had moved out of his neighbourhood and so he would now travel in the car to see them.

"Half the kids that are my friends live miles away. ... I have to go in a car just to see my friends." This links to findings from Pooley (2011) that notes that use of the car is complex and not always regular, but depends on the specific circumstances. All of the children's journeys in a car had to be accompanied by an adult, of course, and a further factor in determining whether or not the car would be used for a trip was whether or not the child was allowed to travel independently. For those children, who were allowed to make the trip independently without their parent, it was less likely that the car would be used and they would then be allowed to travel on their own.

Conclusion

When choosing which transport mode to use to get around, the main factor in decision making for the children appeared to be convenience and this was also strongly linked to distance, as has been found in other studies (Mitra and Buliung, 2015; Scholssberg et al, 2006). Views on which transport mode was most convenient varied depending on the distance that they were going to travel, but this was a subjective rather than objective measure. Although there were some broad commonalities between the children's choice of mode for 'short' and 'long' trips, each child had a differing perception of where the boundary between short and long was.

In the neighbourhoods that the children in the study lived, there was a relatively high amount of walking for short journeys and this appeared to be because it was seen as the most convenient way of getting around. There was good connectivity for walking within the children's neighbourhoods that made it convenient and also allowed them to feel safe, with provision of footways, crossing points and pedestrian only routes, as will be discussed further in chapter 8. Cycling was less common, which may be related to the limited specific infrastructure for cycling that was available, making it feel less safe and parents not providing permission for the children to travel in this way. This could also be linked to social norms around cycling. With very few children using it as a mode of transport it may simply have not been something the children had considered or were motivated to do.

Some of the children occasionally travelled by car for these shorter journeys. This was usually when they were in a rush going to an organised activity and travelling by car had a slight time advantage over walking, or if the weather was poor. It appeared that the decision to travel by car was usually parent led and was based on what the parent perceived as most convenient. Had walking connectivity been poorer, then more trips by car might have been seen. The use of the car for these short trips also appeared to link to how much independence a child was granted to take them on their own. For the children who had been granted the independence to travel in their neighbourhood on their own, they were more likely to walk as they did not need their parent with them. For those that would usually be accompanied on these short trips, then there appeared to be more influence from the parent on which mode to use and subsequently, an increased use of the car.

When travelling outside of their neighbourhoods, either to other parts of the Borough or further afield, public transport or the car would be used. It is not possible to be exact on the length of trip that determined that a child would not walk, and what was a 'reasonable walking distance' for one child might be deemed too far to walk for another. For these journeys, if the child had access to a car and was not able to travel by another means independently then they would use the car. Montel (Mansfield), for example, had access to a car in his household but took the bus to school and was allowed to do this on his own without an adult. Good public transport accessibility enabled those children that did not have access to a car to easily travel to places outside of their immediate neighbourhoods and further afield. Taking public transport was less convenient than using the car and therefore these longer trips on public transport were not usually a regular occurrence in the children's routines. Cycling (or walking) these longer journeys was rarely considered by the children.

The impact of this travel mode choice on the children's experiences of their neighbourhoods and beyond relates to neighbourhood knowledge and sense of control. When children were able to walk their journeys, they demonstrated a good knowledge of the area and were able to navigate around their neighbourhoods confidently. When travelling by car or public transport, the children in the study had a

much poorer knowledge of the space 'in between' the start and end point of the trip, as has also been found by Mitchell et al (2007). Badland et al (2012) uses the term 'hyper mobility' to discuss how increased mobility fuelled by reliance on car travel does not lead to improved links to the external environment, and this is evidenced in the findings from this study too.

Mobility and Use of Time

The children I worked with in the study showed lots of variances in their daily routines but also some commonalities and synergies. This section will discuss some of the key features of their daily routines and the types of experiences that children had in their time spent outside of school. The modes of travel that they used within their daily routines undoubtedly impacted upon these, but it is felt that it is also helpful to explore the children's use of time in its own right. This is particularly important when considering children's experiences of their neighbourhoods when not travelling from A to B but taking part in other activities, which of course is an intrinsic part of children's mobility (Mitchell et al, 2007; O'Brien et al, 2000; Mackett and Paskins, 2008; Ross, 2007).

Levels of Structure and Control

Although this study is focussed on children's experiences outside in the public spaces in their neighbourhoods, it is important to have an idea of how the use of the children's time in these spaces fits into the rest of their daily lives and routines, when either at home or at school. In terms of how the children's daily routines tended to be set up, they varied on a continuum around the two themes of structured or unstructured and controlled or uncontrolled time.

Structured/Unstructured

There was a large variance in the amount of structure that the children had in their time outside of school, that related strongly to Lareau's (2011) distinction between 'concerted cultivation' and 'accomplishment of natural growth.' Some of the children in the study led particularly structured lives outside of school. This structure refers to the types of play and activities they took part in, which tended to be organised, planned and timetabled, including things such as after-school clubs and activities, lessons and learning outside of school and other pre-arranged groups. At the other end of the spectrum, were those children who led relatively unstructured lives. For

them, there were few organised after-school activities or groups and instead they would spend free time at home or at other spaces in their neighbourhood. They might spend time at local shops of facilities, but in an unstructured and unplanned way and not necessarily on a regular basis. For some children, this unstructured time appeared positive, where there was a sense that they could choose what to do or had time for free play. For other children, it appeared more negative, ending in boredom or a sense that they had nothing to do and were being restricted in their choices

Out of all of the children surveyed within the whole class surveys, around 30% stated that they usually play on the street and 79% stated that they usually played in the local park. These begin to give an indication of the overall proportions of children that had an opportunity to engage in unstructured time, though it is noted that this does not give an indication of the frequency that they did this. Most of the children within the whole class surveys stated that they would usually walk to where they played and this was also the case for the children in the study group.

Controlled/Autonomous

Irrespective of whether or not a child was engaged in structured or unstructured activities within their daily routines, there was also always another element of variation in this use of time, as to whether or not it was controlled or autonomous time. Again, this was a spectrum of activity, moving from completely controlled at one end to fully autonomous at the other end. For those children whose time was more controlled, it generally meant they were under adult supervision and guidance. This might be from their parent but could also be from an adult within an after-school club or activity. For those children whose time was autonomous, this was reflected in the fact that they tended to feel that they could do what they wanted with the time, usually with friends or other children. There were often no adults present, though this was not always the case.

This sense of control that the children has over their time is of course subjective and is reflected in the difference in understanding of the terms independence and autonomy. Whereas independence can be seen as a physical measure of whether or not a child is on their own, autonomy relates to a person feeling in control of their actions and the decisions that they make (Ryan and Deci, 2001; Devine et al, 2008). Although it was more likely that a child would feel like they had control if they were not with an adult, the presence or not of an adult did not always define where an activity would sit on the spectrum and whether the child would feel autonomous in their actions. Many of the children were happy to have some controlled time but this tended to depend on the amount of their overall time that it took up.

Level of structured activities LOW HIGH Ashok Warren Maya Leo Rafya Montel Rowan Level of autonomy Eva Henry Unstructured/ Structured/ Finlay autonomous autonomous Structured/ Unstructured/ controlled controlled Rebecca N N Melis Zaidee Melissa Marianna Sophia Simon

Figure 7.1: Model showing the different forms of neighbourhood experiences that the children had

These two spectrums of neighbourhood experience are shown in figure 7.1. Although each child took part in various different activities along this spectrum on a typical week, it was possible to broadly categorise them based on the majority of their experiences as is shown. This gives an initial indication of the children's daily lives and how they spent their time, which will help to anchor some of the later discussions and make it easier to understand how the children's more in depth experiences fitted into their daily lives.

Types of Childhood Experience

In order to better understand how these two spectrums interact and impact on the children's daily experiences, some examples have been used to try to highlight how these four *types* of childhood experience can be understood.

Unstructured/Autonomous

The experience of Warren (Oakley) was a combination of mostly unstructured and uncontrolled time. In terms of his general mobility, Warren usually walked to and from school with an adult, but was also given freedom to walk around his neighbourhood and spend time in it without adult supervision and overall there was a sense of autonomy in his movements around his neighbourhood. When I asked Warren what he did with his time after school during the week, he told me that he would go straight home from school and either play computer games at home or play outside with his friends. His time was therefore relatively unstructured and he was autonomous in choosing what he did.

Although Warren mentioned after school clubs that he had taken part in in the past, such as a football club and a karate club, he told me that he did not do those anymore. At the weekends, Warren's time tended to be spent with his family in a relatively unstructured way. He told me how he would often go in the car to visit his aunt and cousins outside of London or to visit other family friends. Although he spent this time with adults, he also implied that, outside of the journey itself, this was

relatively autonomous time where he could play with his friends or family members. He also had many stories to tell of his experiences outside in his neighbourhood, when he was outside playing with friends and talked about how he was allowed to do this unsupervised, saying:

"I pretty much go everywhere by my own"

"My mum knows all my friends really well. I don't hang out with bad people. I just hang out with my school friends."

The way that Warren described his experiences suggested that he had mostly autonomous and uncontrolled time. He appeared to be generally free to choose the activities he took part in and could take part in these freely and mostly without adult supervision.

Unstructured/Controlled

Melis (Oakley) had mostly unstructured time, but her time was more controlled than Warren's. Melis usually walked to school with a friend and without an adult, but this tended to be the only activity that she was allowed to do that was not controlled by an adult to some extent and where she had full autonomy in her movement.

After school, Melis was always picked up by her mother. She told me how she would often walk straight home and spend the rest of the afternoon and evening at home. On some days, she would visit her aunt who lived nearby or have a friend over to play at home. None of these activities involved spending time outdoors in the neighbourhood and tended to be under adult control to some degree. She also stated how she would always spend at least one afternoon per week at the library:

"On Tuesdays, that's when I go to the library after school. But I don't want to go. I go to the library until it's 7 o'clock and then after 7 o'clock I come home. Sometimes I go somewhere sometimes I just stay here [at home]."

When I asked her about her time spent at the library, she told me how her mother would take her there and drop her off and then pick her up at the agreed time. She was not allowed to go outside of the library until her mother collected her and it did not seem like she felt that she had control over her time when she was there.

At the weekends, Melis spent her time with family and friends. On Saturday and Sundays, she would go to the mosque with her family and would often go there in the car. In her diary, she wrote about visiting her cousins after attending the mosque. This was indoor time at their home and it was unclear how controlled this was. Although she appeared to want to be granted some more freedom, she was also slightly nervous of doing this, When talking about a play space near her home, she stated:

"I always have an adult because this place is a bit creepy"

When asked about playing outside on her own, she stated:

"I don't want to do it [on my own], because I first want to have a go with my parents doing things and then I'll see how it goes."

Melis's time was mostly spent outside of organised clubs and activities and within adult control. Although there may have been some instances in Melis's experiences when she had autonomy, these tended to be when she was indoors either at home or at a family member's home. Outdoors in the neighbourhood, she had limited autonomy in her actions outside of the walk to school.

Simon (Mansfield) also fits into this category of unstructured/controlled, though his amount of controlled time was higher than Melis's. Simon appeared to spend most of his time either at home or at school. He did not spend time outside locally, even to go places with his mother, which appeared to impact on his knowledge of his neighbourhood. In the go-along interview when he was paired up with one of the other children in the study, Simon found it difficult to navigate and did not appear to

know his way around the neighbourhood. Aside from knowing of one particular route that he would walk down weekly for his piano lesson, he did not appear to have any knowledge of how the paths and roads in his neighbourhood linked up. He tried to show that he knew the way and demonstrate confidence, but at one point it became clear that he was travelling in the wrong direction away from school and he had to be asked to turn around.

He told me how he would only visit the park when his grandma was staying, once per year in the summer, and did not seem to regularly visit the local shops either.

I: Does you mum ever take you anywhere - like to the park or anywhere to play?

S: No that's my grandma

I: Does your grandma live nearby?

S: No she lives all the way in Hungary

I: So your grandma would take you to the park but she's not here? Does she come here very much?

I: Sometimes in the summer

H: You'd only go to the park with your grandma but not with your mum

I: Very rarely

When Simon did travel in his neighbourhood, he was always accompanied by his mother and it appeared fairly controlled time, but it was more the lack of travel experiences rather than being accompanied that seemed to have the most impact on his experiences of his neighbourhood.

Structured/ Uncontrolled

Leo (Wigmore) had quite a different daily routine involving more structured activities and organised clubs. However, outside of these clubs and activities Leo was also granted a reasonable amount of autonomy and freedom over his time.

Leo always walked to school with either a parent or carer, so this part of his day was under adult control to some extent. During the weekdays before and after school and

at the weekends, he also had a wide range of organised clubs and activities that he took part in, such as music lessons, climbing and swimming. He stated:

"On Wednesday I go climbing at my climbing club. On Thursday I do orchestra before school and woodcraft after school. On Friday I do gymnastics before school and guitar after school. On Saturday I do violin in the morning and another orchestra."

These activities themselves were likely to be predominantly adult controlled and his travel to these tended to be as well. His entries in his travel diary told me that he usually went to these places accompanied by adults, either one of his parents or his au pair, often walking but sometimes by car.

"I normally drive to my music, which is really close at Stoke Newington school but normally its either really raining or we would be late if we didn't."

Yet, although Leo took part in many organised activities, outside of these he appeared to have a reasonable amount of autonomous time and was allowed to spend his time outside of these sessions relatively freely. This is implied in his comment about a typical Sunday, when he stated:

"Then on Sunday I do whatever I want."

He suggested that he felt in control of his time outside of these organised settings and relatively free to do what he wanted. He also recognised that he might have more freedom than some his peers of his age because he had an older brother, saying:

"I think because I've got an older brother I'm allowed to go to shops like Sainsburys on my own even though I'm younger." Leo's experience highlights how a child having some structured time in their daily routine does not necessarily mean that they also have no autonomy over their use of time, and that it is possible to have a combination of both.

Structured/Controlled

Melissa (Wigmore) described a large amount of controlled time, in various activities and clubs, saying:

"On Monday I do swimming after school and then on Tuesday I do fit for sport and then on Wednesday I just go home with my mum or I go with Alicia to swimming. On Thursday I do fit for sport and then go to ballet with Sophia. And on Friday I do guitar and then on Saturday I do ice skating. On Sunday I do a running club."

Then adding:

"Oh I though you said after school clubs. I do running club before school too."

In terms of her travel to and from school and to and from these clubs and activities, it was all supervised by an adult and usually on foot. Melissa explained that her family do not have access to a car anymore due to her mother's concerns about air pollution, although she would occasionally travel in a taxi with her father. Travelling on foot whilst accompanied by an adult still gave Melissa some autonomy over her actions when compared to travelling in a car. There was still a sense of adult control, though she did not always appear to mind this. Similarly to Melis, she demonstrated a nervousness about going out in her neighbourhood without an adult and being pressured into doing things that she didn't want to by other peers.

"I don't like doing it either. Just because it's sometimes quite dangerous because if you're with someone else and they're more daring than you you could do something you don't want to do like if they've persuaded you to do something dangerous, so I think it's more safe to go out with your parents."

Conclusion

Categorising children's experiences risks losing some of the nuance around their daily routines and the fact that each individual experience could also be categorised differently. However, it is felt that it is helpful to use this analysis to provide a comparison of how the children went about their daily lives and to demonstrate the contrasts within their neighbourhood experiences. Although still simplifying their experiences to some degree, these measures can begin to help to understand the children's lives in a more holistic way than just looking at, for example, percentages of children who walked to school or who were allowed to play outside independently. By looking at their routines in this way, it starts to build a more rounded picture of their experiences.

The amount and type of time that children spent in their neighbourhoods and the proportion of this that was either structured or controlled, impacted on the children's neighbourhood knowledge and how confident they were in getting around and spending time in public spaces. How the children's time was structured appeared to link to a combination of social class and ethnicity, with the white, middle class children being most likely to have more structured time, as Lareau (2011) also found in the US. However, it was not possible to ascertain whether it was social class, ethnicity or the combination of the two that drove this, or the influence of other factors at the neighbourhood level. It was also evident that there was more nervousness from the girls in the study on increasing their levels of autonomous time.

Kyttä (2004) has developed a model that theorises a link between the number of a child's actualised affordances and their levels of independent mobility, hypothesising that those children that have more independent mobility will display an improved ability to explore their environment. The findings from this study support this model, but in addition suggest that it may be helpful to take a more nuanced approach to independent mobility, considering how autonomous a child feels rather than solely if they are physically independent. The findings from this study have also highlighted

the importance of understanding how much structured time a child has and how this can influence a child's actualisation of environmental affordances. It is suggested that a proportion of structured time in a child's daily routine can further support their exploration of their neighbourhood, by providing additional opportunities for this. This can be in addition to any autonomous time, which also forms a positive part of their neighbourhood experiences.

There has been a tendency in some of the literature to view children's structured time negatively, suggesting that children now have overly structured lives. As Holloway and Pimlott-Wilson (2018) discuss and as these findings suggest, this structured time can be beneficial for some children and provides them with a means to get to know their neighbourhood better and to begin to build confidence in spending time in their neighbourhood, even if this is done in a controlled setting. Without these structured activities, and where a child is not given other opportunities to spend time in their neighbourhood or interact with others, a child may end up under-scheduled (Holloway and Pimlott-Wilson, 2018) with a lack of social interaction and competence in navigating their neighbourhood. The evidence from this study suggests, as in the case of Simon for example, that there is much more risk of a negative impact on a child's well-being from being under-scheduled in this way than there is from having a proportion of structured time in a child's daily routine.

Mobility Throughout the Year

A significant proportion of the research on children's mobility has taken place in the summer months (Tucker and Gilliland, 2007), but those studies that have considered the effect of the different seasons on either active travel or physical activity levels tend to find that these are lower in the winter months (Fyhri and Hjorthol, 2009; Davison and Lawson, 2006). In the UK, the climate varies between the summer and the winter, with increased rainfall and lower temperatures in the winter (Met Office, 2020). In addition, the winter months are darker, with it often getting dark not long after school finishes. On the shortest day of the year in London, sunset is at 3.58pm, with the primary school day generally finishing at around 3.30pm.

Much of the data for this study was intentionally collected in the winter months in London, during January and early February, in order to enable a deeper exploration of how the seasons impacted on the children's mobility and experiences, and the overall influence of the natural environment. Follow up workshops with each of the schools took place in May and at the start of June. By working with the children during the winter months, much of the data collected from them reflects their experiences during that time. That is not to say that some of the points that were made about where they were allowed to go and their overall neighbourhood mobility did not also reflect their previous experiences. However, it was felt that by doing the research at this time of the year, it was most likely to provide a more accurate reflection of their habits in the winter months. The go-along interviews were often completed in cold conditions and even in the snow on one occasion.

The children in the study initially completed diaries for a week in January, describing time spent outside or going somewhere. From these diaries, it was clear that even at this time of year the children were making trips actively and often independently. For the regular trips that the children talked about making, the diaries that they completed showed that the time of year did not appear to have a significant impact on how they got around whilst travelling. A couple of children mentioned sometimes using the car instead of walking if it was raining. Aside from this and for most of the

children, it did not appear that they would change the way they travelled or where they went due to the weather when it was a regular journey. Although the children had a different experience of travelling in the winter months, they were all happy walking outdoors in a variety of conditions during the go-along interviews. In their diaries, the children noted that they would still walk to school even when the weather was "cold", "windy", "rainy" or "freezing". They had permission from their parents to continue to make these trips and, although may have been less motivated on some occasions, the regularity of them meant they continued to do them in spite of this.

Sometimes the children would be travelling in darkness due to the time of day. Most of these regular trips being done in the dark (ie. after school in the late afternoon/early evening) were not done independently and so the darkness did not appear to be a barrier to the children travelling or having permission. More of an impact may have been seen if these trips were usually taking place independently given that, out of the whole class surveys that were conducted, just 25% of the children responded that they were allowed outside on their own after dark. This response reflected the parent survey too where, of the nine parents in the study group who responded to this, only one of the children's parents stated that they were allowed out on their own after dark. As Eva stated:

"My mum always lets me go to the shop when it's in daylight. But when it's night time I'm not allowed to go"

Although the children's regular journeys and trips did not appear to be significantly impacted by the time of year, their other informal play experiences and less regular trips were. Ashok (Oakley) stated that he would go out to play football more in the summer and Zaidee (Mansfield) told me that if she ever did play outside of her home, it would be in the summer months. At the follow on sessions with the children in May and June, when asked how often Henry (Oakley) played out on the street he stated "every single day after school." This differed from his diary written in January, when he did not note any occasions when he played outside after school. Marianna (Wigmore) stated that she was:

"Going to the park more and me and my mum are spending a lot of time in the garden."

For some children, this change was linked to a lack of motivation to go outside in the winter months. Eva (Oakley) noted how she didn't like going out in the winter stating:

"It's really cold. First of all I have more summer clothes than winter clothes. Second of all I don't want to mess up my new trainers when it's snowing. Third of all it's cold"

The children understood the importance of wearing the right clothes for the conditions, and Melissa (Wigmore) commented that she would just wear warmer clothes if the weather was colder, but it was still clear that she preferred to spend time outdoors in the summer months. She told me that she would go to the park in the summer to spend time, but would choose to stay inside in the winter. A number of the children believed that they would catch a cold if they spent lots of time outdoors in the winter. Rebecca (Mansfield) explained:

"Because I just feel like it's so cold. I usually stay inside quite a lot. I usually feel like when it's summer it's boiling and you can run around the park whenever and you can relax because of the weather and you can have picnics and stuff. And you don't have to worry about the wind blowing it away and you don't have to worry about things getting freezing or going cold. And you don't have to worry about catching a cold either."

The children were asked to draw their favourite place in their neighbourhoods at different times of the year, as shown in figures 7.2 and 7.3, which reflected these perceptions of the seasons.



Figure 7.2: Melissa's drawing of her favourite place throughout the seasons



Figure 7.3: Rebecca's drawing of her favourite place throughout the seasons

Even those children who appeared to have a closer connection to nature still seemed to reduce their time outdoors playing in the winter months. Leo (Wigmore) and Rowan (Wigmore) talked about collecting conkers in the autumn and enjoying camping trips in the summer months when they would enjoy roaming free in the forest and spending time outdoors. Yet when Leo was asked at the follow on workshop in May what he was doing differently, he stated that he was going to the park a lot more and spending more time in is garden. When Leo and Rowan were asked how often they played out, they responded:

L: In the winter not that much

R: In the summer quite a bit

This may, again, be linked to the fact that the increased levels of darkness in the winter reduce the opportunities for children to spend time outdoors if they are not permitted by their parents to go out after dark.

When exploring the impact of the seasons in this way, it is also important to note the difference in the children's age at the different times of year, which was impossible to avoid. Some of the changes in the children's mobility that were seen may have been due to them being slightly older, but how the children's experiences described above were justified suggest they were more to do with the change in seasons. For some of the other children however, it was apparent that the changes seen were also linked to their increase in age and an increase in granted independence from their parents. Melis (Oakley) had previously noted frustrations in the go-along interview in January at not being allowed to go out much on her own. When asked again in May if anything had changed, she stated:

"Yes I'm going outside, I'm playing with my friends. I play with my scooter, with my bike. I go to the cage"

These were all activities she had expressed frustration at not being allowed to do previously. Similarly, Melissa (Mansfield) and Sophia (Mansfield) stated in the follow up workshop in May that they were allowed to walk to the shops on their own, something that they had not been allowed to do the previous winter. This appeared more related to their increase in age than the effect of the seasons as it was not something that they told me they had been allowed to do in the summer before either.

Conclusion

It was expected that all aspects of children's mobility might be affected by the seasons, with lower levels of travel and play found in the winter months. It is positive to see that, for the children in the study, their regular travel behaviours did not appear to be significantly impacted by the seasons and continued in a similar way throughout the year. In her study in Scotland, Ross (2007) also found that children's journeys to school tended to take place in all weathers. This highlights the importance of these regular journeys for children in enabling them to build confidence in navigating and getting around their neighbourhoods at different times of the year. All of the children in the study walked a large number of their trips and were therefore able to have these outdoor experiences even in the colder and darker winter months. This was in spite of few of the children having particularly strong connections to the outdoors and a number of them noting that they would rather be indoors during the winter months.

The seasons did have an impact on the children's outdoor play opportunities though and these were evidently reduced in the winter months. Very few of the children stated that they played outdoors during the winter months and for all of the children this appeared reduced versus the time that they spend in their neighbourhoods during the summer months. This appeared to be due to increased levels of darkness, with many children not being allowed out after dark, which would have been their only opportunity for free play after school. It also appeared related to feeling less comfortable being outdoors in the cold and this not being a cultural norm. The

children cited fears of catching a cold, for example, and it felt like it was simply not something that they thought they should do, in spite of some of the children being aware that they could just wrap up warmer to avoid getting cold. It appeared to be a combination of the children's motivation to spend time outdoors in the winter months, as well as their parents' willingness to allow them, that reduced their neighbourhood play at this time of year.

This highlights the importance of considering children's mobility not only in the summer months, but at other times of the year too. It is not only the summer in which children's mobility is important, and knowing how this can vary throughout the year can help with better understanding children's experiences of their neighbourhoods and the factors that affect these.

Activity Spaces and Independence

Having an understanding of the children's use of time and their daily lives is useful to begin to understand how some of their experiences are created. Having explored the concept of the children's mobility, what will now be considered is how this mobility, and the independent element of this, came together for the children to form an independent activity space. The relevance of this as a measure of the children's experiences of their neighbourhood will also be discussed.

Activity spaces are commonly understood to represent the areas that children are allowed to roam within their neighbourhoods both actively *and* independently. Independently in this instance is without an adult, but may be with friends or peers, reflecting the fact that independence is about not being supervised, rather than being alone (Badland, 2012) and also that companionship is important (Pooley, Turnbull and Adams, 2017). This is an accepted way of measuring how a child uses a neighbourhood (Han et al, 2020). There are some instances where a child may have not been acting fully independently and there was a parent present at a distance, for example, when the child is playing outside the house. For the purposes of this assessment, this type of experience has been classed as independent as this is how it is usually considered, though it is noted that there are often *inter-dependencies* in how children experience and use space, as will be discussed later in the study (Mikkelsen and Christensen, 2009).

The children's activity spaces from the study are shown in figures 7.4, 7.5 and 7.6, and begin to give an idea of where the children went, how far they were able to go and the spaces that they spent time in independently. These have been largely based on the marked up maps that the children completed, showing the places that they were allowed to go either alone or with other children and is believed to give as accurate a reflection as possible of this. These activity spaces should largely reflect the child's 'frequented domain,' as conceptualised by Moore (1986), which are those spaces that they went to on a frequent basis rather than those that they may only have visited occasionally, though it was not always possible to clarify the exact

frequency of the children's visits. Within this frequented domain is also the child's habitual domain, or those spaces that they visit on an almost daily basis (Moore, 1986). Following the concept that activity spaces show a child's independent time in their neighbourhood, there is a difference between these and where the children spent their time in their neighbourhoods in general, perhaps with their parents or in structured activities. Within chapter 2, the difference between physical independence and a child's autonomy and freedoms within a place has already been discussed. Looking solely at a child's independent journeys may not reflect their overall experiences of their neighbourhood, but are still felt relevant in order to understand how much physical independence the children had and how this relates to their feelings of autonomy and their neighbourhood experiences.

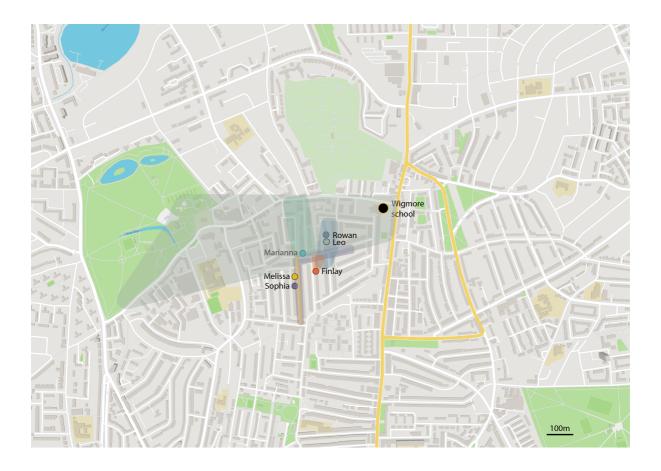


Figure 7.4: The children's mapped activity spaces - Wigmore school

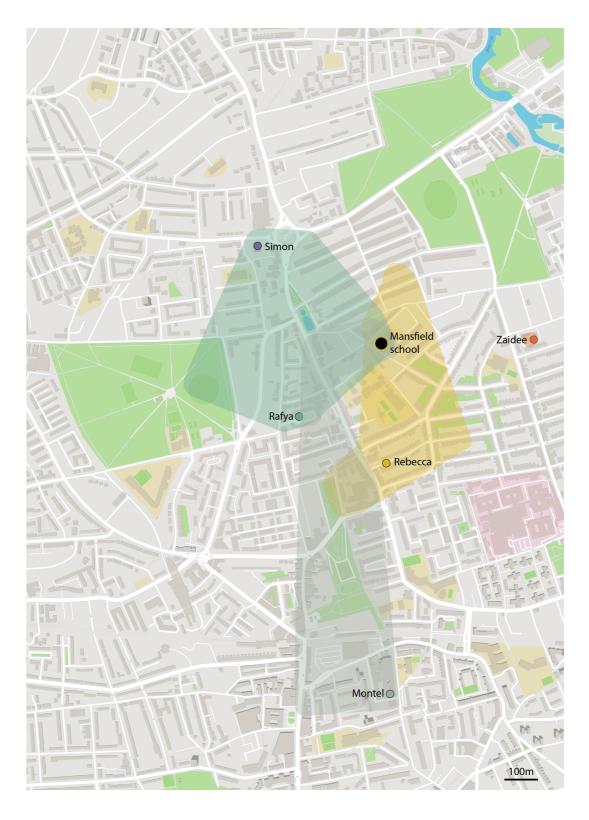


Figure 7.5: The children's mapped activity spaces - Mansfield school



Figure 7.6: The children's mapped activity spaces - Oakley school

The children's activity spaces reflected their regular journeys, such as the trip to school, where six out of the 17 children in the study walked to school on their own or with a friend. They also reflected other neighbourhood experiences, either related to going to other places or playing locally, and in total ten of the children had been granted some independence outside of the journey to school. Just four of the children in the study had not been granted any independence when I worked with them in the spring term and this had decreased to two by the summer term. These figures in relation to independence are comparable to what the rest of their school classes were doing, with 49% from Mansfield school, 39% from Oakley school and 4% from Wigmore school saying they walked to school without an adult⁵. Similarly, outside of the trip to school, 68% of the children in whole class surveys said that they were allowed to play outside without an adult, and this was usually (68%) with other children.

⁵ The figure for Wigmore school is particularly low due to school policy, which will be discussed further in chapter 8

In order to explore the children's physical independence and activity spaces in more depth, these will now be described by school group.

Mansfield School

When looking at the children's activity spaces from Mansfield school, some clear variances can be seen. Both Simon and Zaidee were granted no independent mobility and this is reflected in their activity spaces. Rebecca and Rafya stated that they were allowed to travel to some places on their own, including school, and this is broadly reflected in their activity spaces as plotted. Montel's activity space is less reflective of his broader experiences as a large part of the space that has been mapped is his route from his home to his school, which usually took place on the bus. Due to the additional distance that Montel travelled to school compared to the other children, he effectively has two smaller activity spaces rather than one large one, with one around his home and one around the school.

There are no obvious physical barriers to the activity spaces as mapped for the children from Mansfield school The diagram shows that some of the children are permitted and able to cross over busy roads on their own. Their activity spaces are mostly defined by specific places of interest that they wished to travel to and these acted as anchors to the spaces. In this group, these anchors were specific to the individual and there was no obvious local parks or other destinations that acted as an anchor for more than one child.

Oakley School

The children from Oakley school had slightly larger activity spaces on average than the other two schools, but there was still variances between them. All of the children from Oakley school were granted some independence to move around their neighbourhood. The school acted as an anchor for most of the children and all but one were allowed to travel to school on their own. Aside from the school, the three parks in vicinity to the neighbourhood also acted as anchors for a number of the

children and they were often allowed to travel as far as these spaces but not beyond. Melis and Henry had the smallest activity spaces from this group. Melis was allowed to travel to school independently with a friend, but this was the only trip she was allowed to take like this. Henry was not allowed to travel to school on his own, but was allowed to play outside in the vicinity of his house and was granted some independence when not travelling to school, which is reflected on the map. Ashok had the widest independent range in the group. He was allowed to go to a number of places within the neighbourhood, either on his own or with friends and this is largely reflected in the area that is drawn. Again, there were not any obvious physical barriers that appeared to restrict the children's movements and many of the children were allowed to cross busy roads on their own to get around. Instead, their activity spaces were largely defined by the places of interest that they were travelling to.

Wigmore School

The children from Wigmore school showed a mix of independence levels. It is notable that the school does not act as an anchor for these children and that none of the children travelled to school independently. All three of the girls that were involved in the study had relatively small activity spaces, reflecting the independence that they had been granted to travel to a local shop but nowhere else. Two of the girls gained this independence to walk to the local shop between the spring and summer school terms. Finlay and Rowan's activity spaces are also relatively small, though Rowan also had a large amount of freedom within this smaller space. Leo had the largest activity space from this group and it broadly reflected the amount of independence he was granted. As with the children from the other two schools, the activity spaces were anchored by places that the children travelled to. For Leo, the chid with the most independence in this group, the local park acted as one of these anchors. The main roads with a number of shops and facilities also acted as an anchor and what seemed to be a natural boundary for him that he would not usually travel past.

Intensity of Activity and Quality of Independent Time

Although the children experienced varying amounts of physical independence and their activity spaces varied in size, what the size of these spaces does not demonstrate is the quality of the children's time within them or the intensity of the activity.

In the case of Rowan (Wigmore), his activity space looks relatively small on the map, largely centred on a few roads around his house. Marianna (Wigmore) has a larger activity space compared to Rowan. When Rowan and Marianna's experiences are compared though, Rowan's experiences of his neighbourhood are much deeper and he came across as both more independent and autonomous in his use of space than Marianna. Marianna stated that she was only allowed to go to the local shop on her own and never saw friends outside when she was not at school. Rowan, on the other hand, provided rich descriptions of his play on the street outside of his house with friends, even though it was within a smaller area. He described how he could ride his bike around the block with others, and talked about playing thumb ball against the wall. He also talked about sitting on the bike shed and hanging out with his friends, saying:

"we just sit on them all day long."

Rowan's experience within the space was more within the realms of his habitual domain. He spent his time with friends and he appeared to have autonomy over his actions. Marianna's experience was more infrequent. Although she was physically independent, she did not demonstrate having that much autonomy over the journey she took and was also doing it on her own rather than with her peers. The nature of Rowan's experience both as autonomous play and as a social experience appeared to enable a richer experience of his neighbourhood, where he could then see affordances both for playing and for getting around. Similarly to Rowan, Henry (Oakley) was allowed to play out regularly with friends on the streets surrounding his

house, yet his overall activity space was relatively small, partly because he was not allowed to walk to school on his own.

The other children that reported having freedom to play within their neighbourhoods also demonstrated autonomy with these and described rich and detailed experiences. Leo (Wigmore) had a larger overall activity space, but was also given freedom to play on the streets surrounding his house. He stated:

"Sometimes when Finlay comes to my house me and him just play out for like an hour and a half. Messing around on the street."

"Once me and my friends just went on our own to the cemetery and we were really messing around - it was so stupid."

Leo clearly valued the space that he had to play in his neighbourhood and even though he had a private garden, he stated that he would rather play out at the front as there was more space.

In addition to playing in their neighbourhood, the children also developed better neighbourhood knowledge and had richer experiences if they travelled actively to places with friends. The mapped activity spaces were better at reflecting these, though only picking up on the independent journeys and not reflecting the quality of these or how they were perceived by the children. Rebecca (Mansfield), for example, was both allowed to walk to school with friends and go to some other places in the neighbourhood, such as friends and family's houses, on her own. Although she did not tend to play outside in her neighbourhood, she exhibited confidence in getting around as she was used to navigating on her own and deciding on which routes to take, being autonomous in her decision making. Rebecca's experience of the walk to school was enhanced by the fact that she travelled with friends rather than on her own.

"I go with my two friends. My friend Amira - there's a fence next to the flats and she lives in the flats and my friend Lara. There's a laundry place next to the breakfast place. If you go down there, somewhere there is Lara's house. So she lives in flats as well. Everybody lives in flats! They walk to my house and then when both of them are there we walk to school."

This was similar for Melis (Oakley), who walked to school with her friend Eva (Oakley). For Melis, the walk to school was the only experience of independence that she had been given and appeared to be something that she particularly valued. She appeared quite excited about this daily trip, where she was able to be autonomous in her actions, talking about the details of how long it took, the time they met and some of the things that they did en-route. Melis and Eva had fun debating how long it took them to get to each other's houses:

E: Because you're the closest to the school, I have to walk all the way down to pick you up. It takes me about five minutes.

M: Not five minutes it's not that long. It's two minutes.

E: Three.

M: Well we'll see who's right.

These experiences were in contrast to the girls from Wigmore school, such as Marianna, who were only allowed to occasionally go to the local shop on their own, without friends and would do this using one particular route. They did not show much sense of autonomy in these experiences, even though these short journeys were being made independently. Although they formed a part of their activity space, the quality of their experiences was much lower than for those other children who appeared to have more autonomy over their journeys and could do them with friends. This motivation to want to spend time with friends is also reflected in the fact that, from the whole class surveys, 39% of the children who walked to school on their own stated that they would like to travel with other children.

Conclusion

This analysis has highlighted how, although activity spaces can help to demonstrate a child's levels of independence, they are not necessarily indicative of their independent neighbourhood experiences. There is an understanding that children's independent mobility and therefore their activity spaces have been reducing in recent years (Shaw et al, 2015). Although the size of activity spaces may be a useful measure in assessing how children's behaviours have changed over time, it does not consider the quality of their time spent in these spaces. As other research has found with regard to activity spaces, distance travelled from home is not necessarily an indicator of the sense of freedom that a child has (Villanueva et al, 2012; Weller and Bruegel, 2009).

The measure of distance ignores the fact that having spaces to go close to home can be beneficial to children, reducing the need to travel further afield and potentially increasing their neighbourhood experiences. It was evident from the children's activity spaces and those that were granted more independence that specific destinations, such as parks, acted as anchors for their mobility. For the children in the study, these spaces were always located relatively close to home, and it appeared that it was the distance that these were from home that was most relevant in determining the size of the children's activity spaces. A more detailed analysis of the impact of the neighbourhood environment will be provided in chapter 8.

The focus of activity spaces on size and distance can mean that both the quality of independent time and the intensity of the activity is overlooked (Christensen et al, 2017). The findings from the study showed that both of these were important, as well as how autonomous the children felt. Independent *and* autonomous time with other children, whether for play or travel purposes, was found to be beneficial in supporting the children to feel in control of their actions and in developing deeper interactions and experiences. Some children had frequent, high quality play experiences with friends in spaces very close to home or just outside of their front door that were not reflected in the size of their activity spaces, but were an important part of their

developing independence and neighbourhood experiences. Travelling to destinations independently would be mapped in the activity spaces, but did not reflect the quality of the journey, which varied depending on who they were with and their sense of autonomy. If the child was alone on the journey, they were likely to feel less autonomous and have a poorer experience.

The children's experiences were often inter-dependent, with the importance of being with friends having already been noted. Independence on its own did not appear to be a consistent marker of the quality of time a child spent in their neighbourhood and there was not always a clear line between what was independent or dependent time. This links to the theme of transitioning towards independence, which is the focus of the next section.

Transitions to Independence

How autonomous children feel about their behaviours has already been shown to be an important indicator of the children's neighbourhood experiences. It is accepted, however, that at some point any dependent autonomous experiences will need to take place independently and without an adult. This section explores the children's journeys towards independence and the challenges that they encountered along the way.

Ages of Independence

The route towards independence for children is a gradual one and, in child development terms, begins well before any measurable independent mobility occurs. There were variances in how long the children in the study had had any independence for. When taking part in the fieldwork, they were aged nine or ten years old and whereas some children, such as Ashok (Oakley) and Melis (Oakley), had just fairly recently been allowed to walk to school on their own, Eva, from the same school stated that she had been travelling on her own since the age of seven.

"The reason she let me go at age seven is because if you don't go outside then when you're older you won't be used to not staying without your mum. For example, or if your mum dies you won't be used to walking outside so my mum let me go outside when I was younger so I got used to it."

For some children, they stated that they were granted the freedom to go to the local shop or other local facilities before they were allowed to travel to school on their own, whereas for others the situation was reversed and the trip to school was their first opportunity to be independent in their neighbourhood. For those children who were not yet allowed to walk school on their own, they saw year six, when they would be 10 or 11 years old, as being the point when they would expect to be given that independence, before they began secondary school. The children's gaining of independence was a journey that the children were very aware of.

When they were asked to mark the places on a map that they would like to go to independently but weren't allowed to, most marked a range of places, suggesting that they were constantly seeking out more independence. Once a child had been granted some independence, they were continually thinking about how they could have more, but this was still a gradual process rather than 'all or nothing'. There were certain places they might want to go to, but they did not expect, or want, to be able to go everywhere independently immediately.

Four of the children did not mark any additional places on their maps. Ashok and Eva from Oakley school had some of the widest activity spaces and neither of them marked any additional spaces that they would like to go. In the conversations I had with them, they both suggested that they were relatively content with their neighbourhood freedoms. Having more freedom than many of their peers might also have been a reason why they were not seeking more out at that time, and this would perhaps change as they got older and they saw other children's freedoms increasing too.

Simon (Mansfield) and Melis (Oakley) also did not mark any specific places on their maps that they would like to go but weren't allowed to. Conversely, to Ashok and Eva however, they both had relatively limited independence. Although they both implied in the conversations I had with them that they would like more independence and freedom, the fact that they did not want to suggest any specific places that they would like to be allowed to go suggests a slight conflict or nervousness between what they might want to do and having the confidence to actually do it.

As Simon and Melis demonstrated, an increased amount of independence is not always a comfortable choice to make. Through the children's experiences, they showed a gradual and, often nervous, shift towards independence over a period of time. It was not that one day they suddenly became independent, but it was a gradual process of trial and error. In many cases, it developed as the children gained confidence to navigate around their neighbourhood. Melissa (Wigmore) and Sophia

(Wigmore), for example, described in the summer term session how they were now allowed to walk to the local shop on their own. This was something that they would previously have done with an adult, and both themselves and their parents had gradually gained the confidence for them to take the trip independently.

Seeking out more Independence

This process of seeking more independence took various forms. In Zaidee's (Mansfield) case, she was keen to have more independence and appeared generally frustrated at her lack of it as it was restricting where she could go. She was not interested in playing outside, but she often wanted to go her friends' house down the road to play and her mother needing to take her there and drop her off meant she usually wasn't allowed to go.

"Because the only reason I can't go sometimes is because my mum doesn't want to take me there and pick me back up."

Zaidee also told me that her mother would sometimes drop her off halfway to school so that she could walk the rest on her own and gradually build both her and her mother's confidence to be able to go further. This appeared to be one way of her mother trying to gradually transition towards giving her more independence.

Sophia (Wigmore) showed similar frustrations to Zaidee over her amount of independence, and told me how she wanted to go to the park but was restricted by the fact that her parents did not want to go, and that she wasn't allowed to go on her own.

"I hardly ever go to the park as much as my parents are always too bored and tired to go, which makes me really frustrated and they just want me to finish my homework on time."

Again, her concerns appeared to do more with the need to be accompanied restricting her mobility, rather than necessarily wanting more independence.

Simon (Mansfield) found it harder to voice his concerns about his levels of independence, defaulting to trusting his mother's judgement about what she allowed him to do. He told me how he was not allowed to play freely outside of school time, although struggled to answer when I asked him if he was happy with how much play and free time he got saying:

"My mum says I always get enough time to play in school because we get 1 hour and 15 minutes to play in school."

He did later note, however, that he would like to be able to "go alone somewhere."

Some of these feelings of discontent also appeared to relate to how the children compared to their peers. None of the children from Wigmore school were allowed to walk to or from school on their own due to the school's policy on this. Although Zaidee (Mansfield) was frustrated about not being allowed to go to school on her own, as most of her peers did it, the children from Wigmore school seemed less concerned about not being able to travel independently to school and they were all happy to accept that it was just the way it is. When I asked Rowan (Wigmore) if he would like to walk to school on his own, he simply said:

"It would be a bit easier, as my mum has to do everything and we arrive late sometimes and it's annoying when that happens."

Rowan suggested that the reason they have the rule is at school is in case the school get sued when they get run over. His main consideration seemed to be how it would impact his parents and the school rather than himself. Leo (Wigmore) also did not seem particularly concerned about not being able travel to school independently, although he did recognise the fact that it would allow him to go with friends and when he wanted to.

Rejecting Independence

For some of the children in the study, their parents had attempted to grant them further independence but they had rejected it. In spite of some children wanting more independence, when it came down to being granted this, there was a realisation that it was not always that straight forward or easy.

Both Rebecca (Mansfield), and Eva (Oakley) described times when their parents had allowed them to walk home from school on their own and they both stated that they did not want to do it again, because of having to go home to an empty house.

Rebecca told me:

"I've been home alone before and I haven't really liked it because they were away for like an hour. I just felt horrible because I didn't know how long they were going away so, yeah, it was just... I had to go to my neighbours because I was so scared. I knocked on the door. I left the door open and then they let me in and I closed the door and wrote a note and had to put in on the door. And then we got to make gingerbread. So it ended up good!"

Rebecca stated how although she enjoyed walking to school with her friends and without an adult, she liked being picked up from school by her parent. Eva described how her mum gave her the key to the house to practice going home along but that it was *scary*, as she had no friends to go with. She told me that she did not do it again and told her mother that she did not want to.

Only one of the children, Maya, told me that they had a key to get into their house. All of the other children were reliant on a parent or carer being at home when they returned. Independence, for the children that were granted it outside, did not therefore apply inside the home where many of them did not appear to be comfortable with being on their own.

Some of the children, although granted freedom by their parents to go out in their neighbourhood, chose not to. Maya (Oakley) for example, was allowed to go to lots of places on her own, but she told me that she generally chose not to and would head straight home instead. Warren (Oakley) was granted a reasonable amount of independence, as reflected in his activity space, but appeared to have mixed motivations about using it. He certainly had some experiences of being out with friends in his neighbourhood, as he was able to talk about these. However, when asked about going outside of his home, he told me that:

"I don't mostly. But when I'm bored and have nothing to do I do."

Being granted permission to go out in their neighbourhood independently, did not always mean that the child was motivated to want to do it.

Virtual Independence

Mobile phones appeared to play a role in the children's transitions to independence, helping provide both the children and their parents with increased security and comfort and so meaning the parent was more likely to grant permission. When Rafya (Mansfield) was asked if he took his phone with him when he replied:

"So basically, I call her [his mother] when I'm still inside the house and then we test it out and I go outside so she can hear everything that people are saying. And I put it in my pocket."

He described how his mother tracked what he is doing when playing outside by listening to him on his mobile phone. The other children described the tracking of their movement in other ways. Eva (Oakley) told me that her mother sometimes tracked her on her phone to make sure that she was not going out of the area. Sophia (Wigmore) was granted minimal independence in her neighbourhood on a regular basis. However, she described how, if she needed to go further, her parents would give her one of their phones.

"If I had to go to a further place my mum or dad would give me one of their phones so that they can check where I'm going and don't do anything silly."

The use of mobile phones for monitoring the children's movements like this did not appear to affect the children's experiences negatively. In fact the opposite could be argued: that the ability to use their mobile phones in this way enhanced their experiences, by providing them with opportunities to explore their neighbourhoods independently when they otherwise would not have been allowed. This reflects Davie, Panting and Charlton's (2004) findings that children often felt safer with a mobile phone. The use of mobile phones appeared to support children's developing independence, but it does raise questions about what independence really means, and if those children who are being tracked or followed on a mobile device are truly independent or not.

Conclusion

The study found that the children developed independence within their neighbourhoods gradually, influenced by a range of factors that enabled them to gain confidence and develop the motivation to want to move around independently, and for their parents to grant them the permission to do so. The children's experiences demonstrated how it may be too simple to class a child as independent or not. There are various forms and levels of independence that a child can have and the children's experiences varied on a spectrum, with some having been granted elements of independence at younger ages and others still working through this.

There was a nervousness shown in some of the children gaining independence, and although some of the children sought out more independence, others appeared content with the levels that they had, even if this wasn't very much. This appeared more evident in girls than boys. This was often due to a lack of confidence to have more independence, which they appeared to gradually develop through their dependent journeys with an adult. The children's concerns with not having sufficient

independence often related to the restriction that this had on their mobility, rather than wanting to be independent per se. When some of the children had been offered more independence, they had rejected it, citing a nervousness at being alone or preferring to spend time indoors at home. This also relates to other evidence that suggests that even historically when children played outside more frequently, there was often a parent in close vicinity, perhaps providing the child with some reassurance if something was to happen (Cowman, 2017). It is a long journey until a child will become fully independent of their parents or carers and those that had started that journey had not always had a smooth ride.

As Goodman et al (2014) have discussed, travelling without an adult does not necessarily equate to feelings of autonomy. Milne (2009) also reflects on this nervousness in her work with children in Scotland, where the challenges of independently mobile children engaging with unknown adults are raised. Conversely, it is argued here that travelling with an adult can lead to feelings of autonomy and that this element of a child's journey towards independence should not be dismissed. Benwell (2013) calls for a more sensitive and nuanced understanding of children's experiences and freedoms, that recognise that adult boundaries can also be seen as positive. Ashok (Oakley), for example, highlighted the loss that some children see from becoming independent, telling his friend, Leo:

"You should really be happy that your mum drops you off. Because I miss that time with my mum and dad."

Although the children showed benefits in their neighbourhood experiences of gaining independence, there are also other factors to consider that relate to their motivation to be independent in the first place and how this independence develops. Children need to be physically, cognitively and emotionally ready for it (Han et al, 2020). This motivation and the factors that influence this are important to understand, in order to support any shifts in behaviour.

Summary

This section has described in depth the forms of mobility of the children in the study and how they used their neighbourhoods both for getting around and play. It has highlighted the benefit to the children of active movement in their neighbourhoods, whether with or without an adult. All of the children in the study will have started out moving around their neighbourhoods *dependently* and all demonstrated high levels of active mobility, usually walking, rather than travelling in a vehicle. This mode choice impacted on their neighbourhood experiences, helping them to develop neighbourhood knowledge and competence in navigating around.

The children's levels of structured and autonomous time have been discussed, highlighting how both of these elements can be important in enhancing children's neighbourhood experiences. Those children who spent more time in structured activities and clubs tended to have more opportunities to navigate and spend time in their neighbourhood in different ways and to interact with others, even if it was in a controlled setting. This was found to be of particular importance in the winter months, where the children's levels of play in their neighbourhoods was found to be reduced. These active journeys, conversely, continued throughout the year. It was found that having a sense of autonomy over their actions was often a more relevant indicator of a child's positive experience than their independence. For this reason, the concept of activity spaces has been challenged as not always providing an accurate picture of a child's holistic neighbourhood experiences.

The children's transition to independence was a gradual one. It is clear from the findings from this study that it was strongly reliant on those early, active, dependent movements, where children began to build up the confidence and motivation to want to move around their neighbourhood and their parents built up the confidence to give them permission to do this on their own. These early dependent journeys were often the ones where the children started to build some autonomy in how they used their neighbourhood, which then could be applied later as they became confident at moving around independently. Some of the children were further ahead in this

process than others, with some showing a nervousness to taking on more independence. The opportunity for social interactions when children were either playing or travelling independently were also found to be important in ensuring that they had a positive experience.

CHAPTER 8: The Importance of the Neighbourhood and 'Third Spaces'

The previous chapter attempted to paint a picture of the children's lives in their neighbourhoods. It touched upon some of the physical features of their neighbourhoods that influence their experiences but did not explore these in depth. This chapter considers these physical features in more detail and considers the impact that these had on the children's use of their neighbourhoods.

Whilst walking around their neighbourhoods and talking about their experiences of them, there were a number of features of the children's local areas that it was evident were important to the children. With the study being focussed on children's use of public spaces within their neighbourhood and outside of their home, these spaces, perhaps inevitably, fell into the category of third places. Third places are often described as the anchors of community life and are identified as those spaces outside of the home (first place) and work/school (second place) (Oldenburg, 2001; Carroll et al, 2015; Gardner, 2011). Third places can be divided into three groups, destinations, threshold spaces and transitory spaces, and it is these groupings that will be the focus of discussion. A focus on the children's school is also incorporated within this chapter, as another space in the neighbourhood of relevance to children's mobility and that has been shown to be an important influence on children's lives (Collins and Coleman, 2008; Hollingworth and Archer, 2010).

For each type of space there were aspects to do with their design that impacted on how the children used them. Another important element of these spaces that will be discussed was the social aspect of them. Children engaged in both positive and negative social encounters within their neighbourhoods, which had various impacts on their use of space and their experiences within it.

Threshold Spaces

Threshold spaces are defined as a semi-public space that tends to straddle the gap between the private space of the home and the wider public realm (Gardner, 2011). These spaces were shown to be particularly important for the children in the study in terms of their neighbourhood play experiences, but they also influenced their wider experiences of their neighbourhood. These are spaces that a child would choose to dwell and spend time in or freely explore. The quality of these spaces from a child's point of view is also often based on how playable it is and what affordances for play there might be. These include elements of flexibility, adaptability and creativity in order for a space to be playable for a wide range of users (Lester and Russell, 2008), as well as the presence of other children.

For the children in the study, these threshold spaces often included shared courtyards or green spaces within a housing estate or residential area, but sometimes also extended to the street on which the children lived. Streets are commonly seen as only transitory spaces and as having a predominantly movement function, aiding people in getting around, but the study shows that they can also function as a threshold space in the right setting, where it is perceived as a safe place and there are opportunities for social interaction. 30% of the children from the whole class surveys said they played on the street and a further 29% said that they would like to.

For the children in the study, the quantity and quality of any threshold spaces in the vicinity of their homes affected their experiences of their neighbourhoods in two ways. It impacted on the children's ability to play and spend time locally near their home and in their neighbourhood. It also impacted upon what additional journeys and explorations they would choose to make to other places within their neighbourhood outside of those necessary journeys, such as the trip to school.

The evidence from this study suggests that although play can take place in formal play spaces and playgrounds, for many children their explorations of their

neighbourhood begin by playing in the threshold spaces near to home and these are the spaces that they can use most frequently.

The Street as a Threshold Space

A number of the children in the study lived on terraced streets in residential areas where there was no obvious threshold space, aside from the street itself. Whereas historically the street was seen as a place for play and socialisation, perceptions of the use of the street have shifted over time and children playing on the street is now a much less common occurrence in the UK (Cowman, 2017).

The neighbourhood that the children from Wigmore school lived in was largely made up of Victorian terraced streets and it is these streets that the children in the study lived on. The layout of the streets that the children lived on was fairly typical for this type of neighbourhood, with a footway on each side and parking on both sides of the road. The roads were two-way but relatively narrow, with speed humps down the middle but no other speed or access restrictions. The children described the streets as relatively peaceful and quiet, although there was still traffic passing through at various levels throughout the day.

Although the streets had low levels of traffic both by vehicle and people on foot, they still had a sense of a space for movement, or of being a transitory space, rather than that of a threshold space that might encourage someone to dwell and spend time there. This perception appeared to restrict some of the children's use of the space for play. Sophia (Wigmore) described her street (see figure 8.1) as "really calm" but still did not spend a lot of time on it, apart from the annual street party that she told me happened every summer.



Figure 8.1: Photo of Sophia's street

For this, they would close the road to traffic, changing the quality of the space from one functioning as a transitory space to one functioning as more of a threshold space. Sophia talked about how they would "stay up really late" for the street party and that:

"There's lots of silly stuff, eating lots of junk food and being our own selves hanging out with our friends."

She appeared to recognise the change in use of the street that this street party created. The need for this street closure emphasises how, although her street was quiet, it was still a street that functioned for movement, rather than spending time in. For Sophia and a number of the other children living in this neighbourhood (Melissa, Marianna and Finlay), they did not perceive any signs or signals that it was ok to play

on their streets or that people in general should spend time on them. This meant that they rarely played outside in these spaces.

Rowan (Wigmore) and Leo (Wigmore) lived in the same neighbourhood as Sophia, but their experience was different. Their street was also a Victorian terraced street and was relatively quiet. At a first glance, it appeared very similar to the streets that the other children were living on. However, Rowan and Leo's street was shorter than the other streets in the neighbourhood, with a more compact and smaller block structure (figure 8.2). Their block was approximately 120 metres in length compared to Sophia and Melissa's block, which as over twice this length at around 260 metres.



Figure 8.2: Photo of Rowan and Leo's street

For the boys, this smaller block structure appeared to help to reduce the focus on the street's purpose for movement, making it feel safer and motivating them to want to spend time there, as well as having permission from their parents to do so. Given the

shorter length, there was less risk of vehicles travelling down their street at speed. The boys talked about playing out on their street and also going "round the block." They talked about sitting on the bike shed all day long and playing thumb ball on the street with a tennis ball, or playing on the pavement with a ball. Although they both had back gardens, they preferred to play at the front as there was more space. It was evident that their parents were always at home whilst they were playing, and so they were not wholly independent, but they still demonstrated autonomy over their actions. The fact that the two boys were friends and lived just a few doors away from each other also had an impact on their use of the space. The children themselves, by their presence, had turned the nature of the street into having more of a place than a movement function. This perception that Rowan and Leo's street was a better place to spend time than others was backed up by Finlay, who stated that although he would not play outside on his own street, he would play outside on Rowan and Leo's.

Rebecca (Mansfield) also lived on a Victorian terraced street (see figure 8.3) and she showed similar behaviours to Sophia. Rebecca's street had a modal filter at one end of it, which restricted vehicle access, only allowing pedestrians and cyclists to pass through. The area, however, still seemed to have a strong movement focus. The modal filter on Rebecca's street appeared to create some feeling of safety for Rebecca from motor vehicles, but it wasn't sufficient in this instance to motivate her to want to spend time on her street. There was still a sense from Rebecca that although vehicles weren't able to pass through, people walking and cycling were. The vicinity to a major road also made this a relatively frequent occurrence. There were no other features on her street to encourage play or people spending time there in general and there was a sense that it was a space to pass through only. Rebecca also noted that her street would sometimes close for a street party in the summer, which was a chance for her and her neighbours to get together.



Figure 8.3: Photo of Rebecca's street

In contrast to Rebecca's experiences, Henry (Oakley) also lived on a terraced street with a modal filter at the end (figure 8.4). Yet Henry used this space much more than Rebecca and for him it took on more of a threshold space function. The difference for Henry appeared to be that there was a play space at the end of the road, which was part of the neighbouring estate, plus a small greenspace. These, coupled with the restricted movement on his own street, gave a signal that it was ok to play and enabled him to explore these spaces relatively freely. He also knew other children on his street that he talked about playing with and his parents appeared to have good connections to his neighbours, which may have influenced their decision to grant him permission. He stated that he would sometimes play in the playground as well as a grassy area that he called a "garden" at the end of his road. He would play on his scooter and bike on the road.

"I play on the road and stuff because it's a dead end at the end. And then there's bike storage here. And then I know all of these people."

Henry would sometimes go to the cage at the end of his road with the children that he knew, but only when it was empty of the teenagers who he did not know or want to interact with, saying that they went around smoking and saying swear words. The contrast between Rebecca and Henry's experiences begins to highlight the complex range of factors that are involved in influencing the children's motivations and the permissions that they are granted.



Figure 8.4: Photo of the view onto Henry's street

Unfulfilled Affordances for Play

The other children in the study lived in estate locations where there was a space near their home, aside from the street, that offered some opportunity for play, although perceptions of these varied.

The environment that Simon's (Mansfield) flat was located within featured both transitory and threshold spaces. His flat was located in a 17-storey tower block, located right next to a busy junction and main road (see figure 8.5).



Figure 8.5: Photos of Simon's block of flats

There was therefore a significant movement function in the area around his flat. A green space located next to his block of flats, on the side furthest away from the junction, showed potential to create some form of place function for residents, albeit near a a major road junction, but was not actualised. The space was a fenced off area of grass with some trees, but it did not have any obvious affordances for play or evidence of having been used by children. Added to this, Simon's flat was located near the top of his block of flats, restricting any potential for his mother to confidently watch him if he were to play outside (Gifford, 2007; Gehl, 2011). Unfortunately, these qualities of the space appeared to mean that Simon was not permitted to use it. When I asked him if he spent much time outside, he stated:

"No, I have to stay inside."

Zaidee (Mansfield) lived in a three storey block of flats in a small scale estate. An area of grass, with some simple play equipment was located between the blocks on her estate and provided some threshold space (figure 8.6).



Figure 8.6: Photo of Zaidee's block of flats

A road running around this was for residents only and controlled by a locked gate at the entrance, which meant that there was a very minimal movement function on her street. Although Zaidee did appear to have permission to use the space and may have felt safe using it, unlike Simon, she was not motivated to do so. As Zaidee commented, she did not feel like there was anything for her in the space and although she used it sometimes when she was younger, stated that:

"It's fun but they need more stuff for older children. Because there's only baby stuff. Even the swings are just for babies." When seeing the space that Zaidee had outside her home, her friend Rebecca (Mansfield) commented that she was "lucky" as she did not have a similar space outside her own home. Yet both girls agreed that they would like to see the quality of the space next to Zaidee's home improved. Rebecca commented that they could build a little hut with a table and board games, for example. It was clear in this instance that it was not enough just to provide a space. It was the quality of the space that mattered and this needs to be considered in light of the age groups and people that may wish to use it.

Zaidee also mentioned teenagers hanging around by her flat that appeared to put her off using the space. She did not mention any children of her own age that she was able to use the space with. The presence of others to play with in these spaces is important. 68% of children in the whole class surveys who played out yesterday said that it was with another child.

Actualised Affordances for Play

The other children in the study had more positive experiences of playing in the threshold spaces by their homes and often appeared to view the neighbourhoods surrounding their homes as having a good number of affordances and opportunities for them. Although the quality of these spaces differed, they all gave the children some signals that these were spaces to spend time in, they felt safe using them and there were other children to use them with.

Eva (Oakley) lived on a relatively quiet through road, with speed humps but no modal filters or other restrictions. She also had access to a small public garden, which functioned as a threshold space, just 100 metres from her home. It was evident that the fact that this space was in such close vicinity of her home is what meant she was allowed to use it. She talked about how she would go to play there with friends and, because it was so close by, her mother could just call her when the dinner was ready or when she wanted her to come in. She suggested that she would

go to play there quite regularly and her strong links to the community also appeared to support this.

"Some of my friends I have known them since I was really little."

The space, although not large, effectively shifted the balance of this part of the street from a space for movement to one that was more about place and spending time.

Warren (Oakley) and Melis (Oakley) lived within the Frampton Park estate where through traffic was restricted with speed bumps and sharp bends, as was connectivity for vehicles. There were a number of green spaces and play spaces within the estate that formed these threshold spaces. The quality of these spaces was enhanced by the fact that there were restrictions on movement for vehicles and so possible concerns over the safety of moving between any of the threshold spaces was reduced. Warren talked about how he would play football on the grass directly outside of his flat (although building work later meant that access to this space was restricted). Melis's flat looked onto a grassy area (figure 8.7), similarly to Warren. She was not allowed to play outside a lot at the time of the go-along interview and her movements in her neighbourhood were generally restricted. Yet she would sometimes ride on her bike in this space outside her flat with her father, and this appeared to be because it was in such close proximity to her home and was viewed by her family as a safe space to spend time in.



Figure 8.7: Photo of the grassy space outside of Melis's home

Although the quality of the space that Warren had to use was not necessarily any better than that of say, Zaidee's (Mansfield) or Simon's (Mansfield), he was able to perceive more affordances within the space and this motivated him to want to use it. From talking to Warren, this appeared to be partly from him having other children to play with in the space. As was seen for Rowan (Wigmore) and Leo (Wigmore), it was the children's presence themselves that began to create a sense of improved quality and that it was a space for children to use.

Ashok's (Oakley) street was only likely to be used by people living there due to its design, (see figure 8.8) and this helped to create more of a sense of the whole street forming the function of a threshold space. Near Ashok's block there was also a small fenced off play space for under 5s and a courtyard style pedestrianised area opposite. This also featured a 'no ball games sign' on it. The play space appeared to give Ashok, and his family, the signal that it was ok to play in this area and he felt

safe using it. When asked about the no ball games sign, he appeared undeterred by it, saying:

"yeah we can still play, Most of the time there's no-one there"

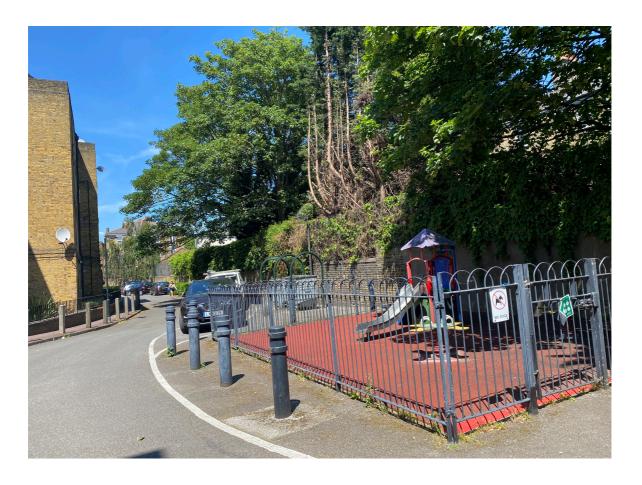


Figure 8.8: Photo of the play space and road next to Ashok's home

He stated that he would regularly play football and play on his bike, and talked about how he would just move out of the way if a car came down the road, with clear autonomy over his actions. Although Ashok was concerned about teenagers hanging around outside his house, this did not stop him using the space due to his other positive social connections.

At the front of Ashok's block was also a square of grass, which all of the flats overlooked and that he implied he had played on in the past, but the gate to this was unfortunately locked (figure 8.9), with Ashok commenting:

"So this is where we have two of the gardens but we're not allowed to go in here"

He stated that people set off fireworks a number of years ago and since then the gates had been locked, with no-one allowed to use them.

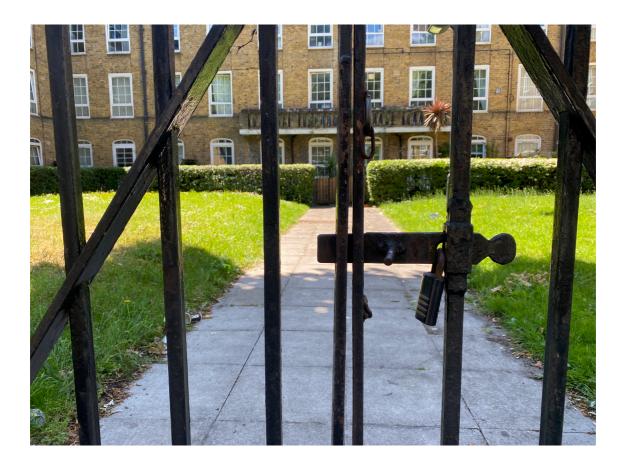


Figure 8.9: Photo of the locked space next to Ashok's home

Rafya (Mansfield) lived in a gated estate, which only those who lived there could access and this effectively turned the roadway within his square into a threshold space (figure 8.10). He talked about how he would play in his square on his bike with friends, as well as playing hide and seek and football with his father.

"There are people next door that are my friends and we always come here and play on our bikes."

His use of this threshold space outside of his home was clearly driven by the presence of other children playing in the space too.



Figure 8.10: Photo of the road space outside Rafya's home

Montel (Mansfield) talked about playing football in one of the playgrounds next to his block of flats and racing his bike on the estate road (figure 8.11). He would also be playing with other children his age.



Figure 8.11: Photo of the estate road where Montel would race his bike

Although there were some differences in how the individual children used and perceived spaces, having a good quality space outside of their home that was not just about movement and passing through was important in enabling them to use this space freely. This helped them to feel safe using the space. This then also made it more likely that other children would use it and they would be able to play together. The children that used these spaces were not necessarily wholly independent when in them and there was often an element of supervision. However, they all appeared to have some autonomy and control over their actions whilst in the space.

Play and Exploration in the Wider Neighbourhood

The impact of these threshold spaces extended further than the vicinity of the children's homes though, and also affected their wider experiences of their neighbourhoods. When considering the impact that they have on a children's

journeys and explorations moving away from their own home, it is evident that how children used the space in the vicinity of their home impacted on how likely they were to spend time freely in their wider neighbourhoods.

Those children that were able to explore and play in the vicinity of their home were also more likely to explore their wider neighbourhood too. For Leo (Wigmore), his experiences of playing on his street appeared to act as a start point for his wider experiences of his neighbourhood. His mapped activity spaces were much larger than those of the other children from his school. For Leo, as long as the transitory spaces and connections were there, he was able to explore his neighbourhood more independently and his positive, autonomous experiences of playing near his home appeared to give him confidence in getting around the wider neighbourhood. These were also likely to support his parents in granting him permission. Leo's friend, Rowan (Wigmore), on the other hand, who would also play with him on the street near their homes, did not spend time exploring the wider neighbourhood as freely as Leo did. This is a useful reminder that although certain conditions will enable neighbourhood mobility for children, they do not guarantee it. In spite of his frequent neighbourhood play outside of his home, Rowan's parents had not yet granted him the permission to travel much further independently.

Ashok (Oakley) talked of a rich play experience in the vicinity of his home, but also talked about being able to travel and explore his wider neighbourhood independently. His mapped activity space was one of the largest in the group and he did not appear to see barriers to connectivity in the area that would prevent him from getting around. He was a child who seemed to see the whole environment as a playground asking to climb up drainpipes and hanging and climbing on football goals. He described his experience of a new block of flats near his house before it was built.

"Before there used to be like, I don't know what it was. Some abandoned place there was poles and stuff like that and and me and my friends we'd do parkour and stuff like that in there."

His friend, Henry (Oakley), also demonstrated his ability to use spaces creatively and find ways into places that are meant to be out of bounds. For example, there was a small patch of grass behind a block of flats that he called the 'secret garden.' It was locked but he seemed skilled at climbing the gate to enter.

Those children who did not frequently play outside freely in and around their homes were less likely to have the freedom to explore their neighbourhoods more widely and this appeared to be due to a combination of their lack of motivation to do so and not having the parental permission required. Zaidee (Mansfield), for example, did not want to use the threshold space next to her home. She was also not allowed to explore her neighbourhood freely and appeared to have quite restricted freedoms. Perhaps if the threshold space outside of her home had been more appropriately designed for her use and she had others to use it with, this would have given both her and her mother confidence that other parts of the neighbourhood were also safe to explore and they would have perceived the quality of the spaces in a different way.

There were some exceptions however. Rebecca (Mansfield) and Maya (Oakley) did not play outside in the vicinity of their homes, but did have some freedom to travel more widely around their neighbourhoods. Rebecca talked about making journeys around her neighbourhood often independently, though these tended to be for travel rather than play or exploration. For her, the lack of any threshold space on her street seemed less important than the connections that the transitory spaces created. This was similar for Maya, who did not tend to play outside, but was permitted to make journeys independently around her neighbourhood.

Conclusion

The children showed that having access to some form of a threshold space close to their homes was important, not only for their experiences in vicinity of their home but also for their experiences of their wider neighbourhood. How children perceive a space and their motivation and permission to use it is individual, and influenced by a range of factors, but there are certain commonalities that affected many of the children within the study. Where there was a clearly defined space that was not predominantly transitory in nature, the children were more likely to spend time outside in their neighbourhoods and feel safe doing so. There did not necessarily need to be strong signals for play, but the clearer it was that it was ok to play and spend time there the more likely it was that the children would. This could be through the appropriate placement of play equipment or signage, but the simple presence of other children of their age was one of the strongest signals. This reflects other research in this area demonstrating the relevance of the social element of children's time in these spaces (Biddulph, 2010; Bornat, 2016; Marzi, Demetriou and Reimers, 2018; Lambert et al, 2019) and touches upon the importance of the need for children to be accepted within all forms of public space, not only formal playgrounds.

The design features of the spaces that attracted children to them reflect other findings from the literature and often linked to perceptions of safety, such as the success of courtyard designs for children's play in the case of Rafya (Mansfield) (Prezza et al, 2001) and cul-de-sac type designs in the case of Ashok (Oakley) (Wheway and Millward, 1997; Handy et al, 2008; Islam et al, 2016; Sharmin and Kamruzzaman, 2017; Moore, 1986). Although modal filters often create a form of cul-de-sac, the impact of these on the children's use of the space was more mixed and appeared influenced by whether or not there were also other indicators that it was a space for children to play in and how dominant the transitory nature of the space was. Living in a high rise tower, as in the case of Simon, significantly reduced the potential for overlooking and is likely to be one of the reasons for his lack of neighbourhood play (Whitzman and Mizrachi, 2012).

For some children, the quality of the space mattered less and they were happy to play on an un-landscaped patch of grass or to play football on a quiet road with a 'no ball games' sign on it. Leo (Wigmore) and Rowan (Wigmore) demonstrated how streets can take on a threshold space function in the right setting. For others, such as Zaidee (Mansfield), the quality of the threshold space appeared more important.

Although the space next to Zaidee's home was well-overlooked and gave some indications that it was ok to play, it still was not sufficient to motivate her to want to use the space. One of the reasons was the lack of other children to play with, linking again to social norms around the acceptance of children playing outdoors. This example highlights the importance of considering the features of these spaces that will motivate a child to use them, to ensure that they are spaces that *all* children will want to and enjoy using.

The children's play and exploration around their homes also impacted on their experiences in their neighbourhoods more widely. Those children that played in threshold spaces around their homes were more likely to take part in explorative journeys around their local areas and play more widely and independently within them. The play they took part in near their homes acted as a start point for further journeys and explorations. They had begun to build the confidence to navigate their neighbourhoods on their own through their autonomous play.

Transitory Spaces

Transitory spaces are those spaces and places that the children pass through on the way to other places, sometimes termed 'places between places' (Gardner, 2011). The various modes that the children used for travel in their neighbourhoods has already been discussed in chapter 7. Given that the children's travel around their neighbourhoods tended to be on foot, it was the spaces used for this that were most important to them and, for this reason, the analysis of transitory spaces focuses mainly on the footways and paths that the children used to get around on foot. These transitory spaces had an impact on how the children experienced their neighbourhoods and how they got around.

The children in the study all lived in high density and relatively compact neighbourhoods. It was the connections that the transitory spaces enabled and created that impacted on the children's mobility. The relationship of these spaces to other parts of the public realm, particularly roads and the connectivity that these create for vehicles, also had an impact on the children's experiences. The features of transitory spaces that stood out as being most important for enabling connectivity for the children all related to being able to get around both safely or conveniently.

Getting Around Safely

Safety concerns are one of the most commonly reported barriers to active school travel (Mitra, 2013; Kelty, Giles-Corti and Zubrick, 2008), highlighting the importance of feeling safe when getting around actively for children either walking or by other means. When considering safety, the focus is on perceptions of safety rather than quantitative indicators of safety. It is these perceptions that have been found to have the most obvious impact on children's behaviour and can begin to explain individual differences within the same neighbourhood (Timperio et al, 2004; McMillan, 2007; Kelty, Giles-Corti and Zubrick, 2008).

There are various features of the built environment that can impact on both objective and perceived safety and that, in other studies, have been shown to lead to increases in active travel. Most of these relate to reducing the dominance of the car to some degree, although the measures that have been shown to have an impact on children's mobility are relatively small-scale interventions rather than much larger scale reimagining of the traffic system where the priorities given to cars and people are fully rebalanced.

Within each of the neighbourhoods that the children lived, it was possible to get around either on foot or in a vehicle. The children in the study generally travelled on foot in their local areas as has already been discussed. The children themselves rarely mentioned having concerns over the threat of vehicles on the road. However, how safety impacts on children's mobility is also influenced by their parents' perceptions of safety and whether or not they grant permission for certain modes (Timperio et al, 2004; McMillan 2007; Kelty, Giles-Corti and Zubrick, 2008; Carver et al, 2008; Veitch et al, 2006; Loebach and Gilliland, 2016; Alparone and Paccilli, 2012; O'Brien et al, 2000). Out of the nine parents that completed the parent survey, just two stated that traffic danger was a reason that they did not let their child travel unsupervised, suggesting that the children's parents also were not concerned in this regard.

This lack of safety concerns over the road and moving vehicles may reflect the fact that the children's neighbourhoods had the infrastructure in place to enable relatively safe movement on foot, as will now be discussed.

Footways

Within the UK, most streets, particularly in urban areas, tend to be designed with a footway running along the edge. In the initial workshop that the children took part in, they were shown a range of historic images of children playing on the road. When commenting on these they did not suggest concern over the possible threat of vehicles affecting safety. The impression that they gave was as long as they could

control the traffic, whether that was by being located safely on the footway, or being able to cross the road at a crossing point, then they did not feel threatened by vehicles when they were walking. This reflects other research, which has shown that both no traffic lights on crossings (Timperio et al, 2006) and a lack of footways (Davison and Lawson, 2006) will reduce active travel and physical activity levels in children.

When looking at a black and white image of two girls sitting on the edge of the footway and two boys playing with a tyre, Melis stated:

"When you look at the way the girls are sitting, they're sitting where the cars go past and their feet might get stuck under a car when it goes past"

She highlighted how she saw the footway as an area of safety that provided protection from the cars, but venturing onto the road may be a risk. When discussing another of the pictures showing children in a 'walking bus' travelling to school, Warren highlighted how he saw the pavement as protection when of sufficient quality, saying:

"if someone trips over someone could fall into the road"

Ashok also noted his feelings on the safety of this image and highlighted his concerns over the design of this particular street, stating:

"there's going to be lots of cars swerving around that might hit some people"

The neighbourhoods that the children lived in had reasonable infrastructure for walking, but they were also heavily dominated by a road network for vehicles. Although most of the roads within their neighbourhoods were minor, each of the neighbourhoods had at least one major road passing through it. Again, the provision of footways along these roads meant that the children did not show particular safety concerns about walking along them. They would always be careful, however, to

remain on the footway and not to veer off these. This is evidenced in the photographs that the children took as part of the study (figure 8.12), where they were nearly always placed safely on the footway.



Figure 8.12: Simon's photo of the road taken from the footway

Footways appeared to be a minimum standard for the children to be able to walk safely within an area. If a footway was in place, they were generally happy to walk along it and the provision of a footway along the side of the road meant that connectivity by walking was similar to that for vehicles. Although the children did not ever appear particularly fearful of cars and other vehicles on the road, this was partly because they were able to trust that they were in a safe space on the footway where they trusted that vehicles would not enter. This may appear to be an obvious assertion to make in the context of London, but yet there are many places, both within the UK and in other countries, where footways are not the norm or are not

always evident alongside roads, and this is likely to have an impact on a child's mobility and their neighbourhood experiences.

Formal Crossing Points

Formal crossing points over roads were also an important factor in how safe children felt in getting around their neighbourhoods by walking and how these transitory spaces functioned. Within all of the neighbourhoods, there was a least one main road passing through the neighbourhood that the children spent time in. It was these busier roads where crossing points were particularly important for the children in enabling them to be able to get around their neighbourhoods. Where there was a signalised crossing point, children were happy to cross the road and felt safe as they trusted that drivers would stop for them. This was evidenced in the go-along interviews where the children were only willing to cross busier roads at signalised crossings. Whenever there was a crossing point over a road, they would willingly walk further to cross at that point rather than crossing without it.

At Oakley school, most of the children who attended the school needed to cross a busy main road to get to school from their home. A signalised crossing point just outside the school (figure 8.13) meant that this was never raised as a concern by the children in the study and the road was not seen as a barrier to them.



Figure 8.13: Photo of the crossing point next to Oakley school

Rafya (Mansfield) lived across a main road from Mansfield school but was still allowed to travel to school on his own and spend time freely in the area, as there were a number of signalised crossing points along the road where he was able to cross and he felt safe in doing so.

For the minor roads without crossing points in place, the children had to rely on feeling safe enough to cross without a crossing point and again, rarely commented on this being a concern. They would still be careful, however, and would often use a degree of caution. Eva (Oakley), for example, said as she crossed:

"Look left, look right."

Some children's mobility was restricted, however, where there was not a crossing point in place and their parent did not deem it safe for the child to cross on their own.

Rebecca (Mansfield) lived very close to a zebra crossing across the main road, but it required crossing another relatively busy junction to reach it. She was therefore not allowed to cross over the road at this point without an adult. When talking about going to the leisure centre on the other side of the road, she stated that:

"With those cars it's impossible to cross the road, so hard."

Henry (Oakley) was not allowed to travel on his own to school due to having to cross a road without a crossing point. He stated that he would like to walk to school on his own but:

"my mum doesn't let me because there's a big road down there."



Figure 8.14: Photo of the street that Henry was not allowed to cross

Henry was not referring to the major road but one of the more minor roads cutting through the residential area. The lack of a crossing point restricted him being able to travel independently to school and, if he was out in his neighbourhood on this own,

this road acted as a barrier for him (figure 8.14). It should be noted that since the fieldwork for the study took place, modal filters have been put in on this road to restrict vehicle movements.

Simon (Mansfield) was not allowed to cross these types of minor road on his own either, but also showed a nervousness towards crossing at crossing points too. This nervousness from Simon appeared to reflect his mother's safety concerns. When I asked Simon about his trip to school and the fact that he was always accompanied by his mother, he told me:

"She doesn't trust me because she wants me to be safe, before there are a lot of people always going in here. Especially the cars. Because we go past quite a lot of crossings. About five crossings. So I don't really want to get hit."

Simon and Henry's experiences highlight how parental perceptions of safety can have an influence both on children's own perceptions of safety and their neighbourhood mobility.

Stranger Danger

Research has shown that children often reflect their parents fears, and 'stranger danger' is a common fear that parents hold, especially in lower socio-economic areas (Foster et al, 2015, Mitra, 2013; Kelty, Giles-Corti and Zubrick, 2008). Although parents in the study were not asked about their concerns over strangers, the children demonstrated a fear of people that they did not know. These were particularly prominent in the minds of the children from Oakley school, though all three groups showed some evidence of this. When the children from Oakley school were asked to say one thing about their neighbourhood, for example, the children responded as follows:

"My neighbourhood is quite bad because there's lots of gangs near where we live round us" (Ashok, Oakley)

"My street is quite quiet but the estate next to it has lots of teenagers who hang around and ride bikes around the place and steal things" (Henry, Oakley)

"I live in a flat so sometimes I see gangs hanging around and I don't feel so safe" (Melis, Oakley)

The term 'gangs' has stronger connotations than 'teenagers,' though the children were not questioned further on what they meant by these terms. Nayak (2003) notes that children will often use the term 'gang' to describe groups of people hanging around, but often comes with connotations of fear.

The children were concerned about coming across strangers in the transitory spaces and what they might do to them. Aside from potentially reflecting the concerns of their parents, the children's association with strangers also appeared linked to antisocial or criminal behaviour that they had experienced and that had made them feel less comfortable in using the space or in being able to trust a stranger. Eva (Oakley), for example, stated that she once saw a stabbing at the corner of her road. Ashok (Oakley) talked about two incidents where he said that he had seen someone with a gun.

The children's concerns over safety appeared to impact on their experiences in the space more so than their actual mobility and the children still seemed motivated to use the transitory spaces nonetheless. Some of the children marked places on their maps that made them worried or afraid, but these did not appear to impact on the places that they actually went to. They were good at overcoming fears and safety concerns if they were permitted by their parents to do so. The presence of other people that they knew also appeared to have an important positive impact on their use of the space.

Getting Around Conveniently

Other features of transitory spaces that impacted on children's use were related to convenience. Convenience was an important factor in decision making around which travel mode a child would use. In relation to walking, where there were clear, legible and direct routes that could be walked, this increased the likelihood that they would use the route, particularly if this meant that walking was more convenient than travelling by other means.

There were very few examples in the children's neighbourhoods of where there was not a clear, direct route available to the children and connectivity for walking was generally good. Where there was not a direct route available however, it impacted on the children's experience of their journey. The local leisure centre within the neighbourhood near Wigmore school, for example, was located approximately a 0.6 mile walk from the children's homes but as the crow flies is only around half this distance. Whichever way the children walked, they had to take a detour to go around the High School that sat opposite it to get to the leisure centre. Set within a large site, going round the boundary of the school extended their journey time but also led to a more complicated route overall. When Sophia was asked the way to the leisure centre, she said:

"We have to up that way, then that way and down that way."

This indirectness did not impact on the children's choice of transport mode to get there, as there was not a more direct route for vehicles and so the children still chose to walk. However, it did appear to impact on their experiences of getting there and a sense that it felt quite complicated and this came across in the go-along interviews. When Melissa (Wigmore) and Marianna (Wigmore) were asked the way back to school, they were not aware of the quickest route. In spite of generally good overall neighbourhood knowledge, they ended up walking an longer route back and they showed a poor understanding of that particular space.

As well as helping the children to feel safer, crossing points also often helped to improve the directness of routes for the children and so made them more convenient. Rafya (Mansfield), for example, was allowed to walk to school on his own and this walk involved crossing a main road at a signalised crossing point. The crossing point created a clear and direct route for him to be able to take between home and school, meaning that he felt comfortable making this trip.

Although direct routes tended to enhance the children's experiences by making their journeys more convenient, directness did not always come across positively. Simon (Mansfield) described the straight route that he would regularly walk with his mother from his home to his piano lesson, telling me:

"All we have to do is go forwards."

This directness got Simon to his piano lesson conveniently but it may also have played a role in his otherwise poor neighbourhood knowledge. Simon only viewed the route as somewhere that would get him from A to B, rather than appreciating any other qualities of it.

Pedestrian Only

Pedestrian only routes were well used and liked by the children, and tended to improve the efficiency of how they were able to move around their neighbourhoods. They created more direct routes for walking and enhanced their experiences of place. These pedestrian only routes also reduced any potential risk the children might have felt from having to cross roads, as well as tending to lead to better connectivity on foot compared to by vehicle.

The Frampton Park estate, where three of the children from Oakley school lived, had much better connectivity on foot than by motor vehicle. The estate has a familiar design when compared to other post-war estates of its era. It is relatively inward facing and the streets within it have a number of traffic calming measures in place. It was not possible for motor vehicles to use the estate as a through route as

movement was restricted to travelling in a loop around it, with gates at some of the entrances (figure 8.15).



Figure 8.15: Photos of the gated entrance and routes around the Frampton Park estate



Figure 8.16: Photo of the pedestrian only entrance to Frampton Park estate

There were speed bumps and relatively tight bends, which all further reduced vehicle movement and speeds. For people on foot, connectivity was very different and the reduced vehicle movements meant that the children who lived there felt it was a safe place to walk around. It was possible to pass through the estate more easily on foot than by car and there were a number of pedestrian only access points which improved its permeability when on foot (figure 8.16). This allowed the children to walk to school easily and by taking the most direct route, which would not have been possible if they were travelling by car.

In the neighbourhood where the children from Wigmore school lived, there were a limited number of access points for motor vehicles but three additional routes that were pedestrian only and that appeared to improve connectivity for the children by improving how conveniently and directly they could access places.



Figure 8.17: Photo of the pedestrian only path that Marianna used to reach Church Street

For Marianna (Wigmore), she was allowed to travel from her house to a local convenience store on Stoke Newington Church Street using a pedestrian only cut through from the residential area to Church Street, meaning that she was able to get there without having to cross any roads (see figure 8.17). This was a slightly more direct way than someone would have to take travelling by motor vehicle.

Leo (Wigmore) was allowed the greatest amount of freedom within the neighbourhood and was allowed to go to some of the shops on the High Street. Again, a pedestrian only cut through at Kynaston Avenue meant he could do this more directly than if he had to follow the road around and this is the route that he showed me he used. A fourth pedestrian only path meant that it was also possible to get to the leisure centre by a pedestrian only route, but this was not seen quite as positively by the children. Although enabling the children to travel away from the main road for part of their journey, this path did not create a more direct route to the leisure centre than remaining on the road and legibility of the route was poor. The path also passed through a housing estate and was not well signposted. Sophia (Wigmore) told me:

"I do know a shortcut, a bit past my house. ... It's a bit tricky from here so probably I wouldn't go from here."

Although Sophia was aware of the route, the poor legibility of it meant that she tended to stay on the busier roads, which felt easier to navigate for her. Within the estate where this pedestrian route existed, there was also a ball cage for playing football and basketball that Leo said he sometimes went to. None of the other children were aware of it as it was not obvious where it was and was hidden within the estate. Although the pedestrian routes to it meant there was reduced threat of traffic, the poor legibility meant its use by the children was limited in this instance (figure 8.18).



Figure 8.18: Photo of the footpath to the leisure centre and ball cage

The children's experiences of their neighbourhoods often seemed enhanced when using these pedestrian only routes. It is notable that although some of these routes may have been narrow and not well overlooked, the children did not raise concerns over their safety. Ashok (Oakley) talked of an alleyway next to the Frampton Park estate, telling me that he would always go with his friends there. He also knew that it was the quickest way to go. Rafya, from Mansfield school, described one of the routes to his home as a "secret passage." He perceived a predominantly pedestrian space as more secret than other routes and appeared to like using it not only because of the improved connectivity that it led to but also because of the experience that came with it. The children generally liked these pedestrian only routes and, during the go-along interviews, suggested that they would always use them when they could.

Conclusion

Transitory spaces created connections for the children and they used these spaces to get around on foot when they were perceived as convenient and safe by both the children and their parents. In contrast to their use of threshold spaces, the children in the study did not feel threatened by vehicles on the road if they were using a space to get around, and this appeared largely due to the physical infrastructure in place to support walking, particularly the presence of footways and signalised crossing points. In an otherwise vehicle dominated environment, these features influenced both parental and child perceptions of safety, making it more likely that the children were both permitted and motivated to get around on foot. Other studies have noted the importance of considering parent's perceptions of safety and their attitudes as influences on children's neighbourhood mobility and freedom (Wolfe and McDonald, 2016; Vlaar et al, 2019). Parents effectively acted as a gatekeeper for the children and having permission from a parent was usually a first step towards being able to spend time in their neighbourhoods.

Some of the children voiced safety concerns over interacting with strangers, but this did not appear to impact on their actual mobility, as has also been found by Huertas-Delgado et al (2018). Positive social connections helped to support children moving around their neighbourhood in these spaces and having a friend to travel with or social connections that the child knew in the neighbourhood was an important influence, as Timperio et al (2006) have also found. These findings link to other evidence highlighting the importance of safety considerations in children's use of transitory spaces (Davison and Lawson, 2006; Timperio et al, 2006; Whitzman and Mizrachi, 2012; Boarnet et al, 2005; Brussoni et al, 2020).

Footways and crossing points helped to make the children's trips on foot more convenient compared to travelling in a vehicle, as did pedestrian only routes and those that were either heavily traffic calmed or that restricted vehicle usage. Children also tended to feel safer on pedestrian only routes due to the absence of vehicles. The children particularly enjoyed travelling in these spaces, as they appeared to

provide a more sensory experience, linking to other findings from Kullman (2014) that children often appreciate the smaller details of the street environment that may be unobserved by adults.

Destinations

Destinations, within the framework of third places, are those spaces outside of the home and work that might be used for meeting other people, such as community centres, cafes, shops, public parks and playgrounds (Gardner, 2011; Carroll et al, 2015). These are places that children can play in or explore and that will engender a sense of belonging. The range of spaces that can be classed as a 'destination' in this sense is broad, but there are a number of specific types of these third spaces that this study shows are important to children. These include neighbourhood parks, local shops and other community facilities.

The destinations considered within this study are the spaces that are within walking distance of the children's homes. The proximity of these spaces is important when considering the impact that they may have on children's experiences of their neighbourhood. How these destinations are linked up and the transitory spaces that connect them is also an important consideration. All of the children within the study lived in high density neighbourhoods and they all had a wide range of potential destination spaces within close proximity. However, there were clearly certain types of space that were more significant to the children than others and their experiences were influenced by these.

When asked to list out their top five places in their neighbourhoods, the children's most frequent responses were shops and cafes or the homes of friends and family and it was clear that they were drawn to these relatively urban and indoor destinations. Parks and public open spaces were also popular with the children as were leisure and sport centres. Only one child noted what might be called a 'special place' or somewhere that they had adopted as their own. Ashok noted the 'tiny forest' near his home and the local building site as two of his favourite places, but this type of place did not feature in any of the other children's lists. As is evident from the above, the children's focus on places to go centred on indoor space or a form of designated outdoor space. There was minimal evidence of the children engaging in natural, outdoor spaces, aside from Ashok's experiences. This contrasts strongly

with Hart's findings from the 1970s (Hart, 1979), who found that after friend's homes and the ballfields, children's favourite places all revolved around the natural elements. These ranged from rivers, lakes, trees and hills to play forts and frog ponds. Although it is acknowledged that the context was different, when comparing how the children in this study engaged with and perceived destination spaces, the difference is quite striking.

Parks and Play Spaces

When looking at the children's activity spaces, as discussed in chapter 8, it is evident that the larger parks surrounding the children's homes tended to provide anchors for the children's activity spaces and influenced where and how far they would travel within their neighbourhoods. For the children from Oakley school, the parks of London Fields and Victoria Park/Well Street Common acted as anchors for many of them and these often delineated the outer boundaries of their activity space. For Ashok, for example, who had the largest activity space in the group, this spread east to Victoria Park and west to London Fields, but went no further than these.

The children from Mansfield school were close to Hackney Downs, Clapton Square and Millfields park. Rafya's activity space extended to Hackney Downs, though this was less than a five minute walk from his home. Rebecca talked about using Clapton Park for play, though always with an adult, which was just a short walk across the main road from her home. She stated that it's a "really nice playground." Simon noted an estate play space near his home (figure 8.19), though stated that he would only go there a couple of times per year and always with an adult. Millfields Park is located to the east of the children's school, approximately a five minute walk away. Yet none of the children talked about visiting this space. This is perhaps because their activity spaces were focussed strongly around their homes and school, which did not tend to stretch in this direction. All of the children, apart from Zaidee, lived to the west of the school, and therefore Millfields Park appeared to fall outside of the zone that they would usually explore.



Figure 8.19: Photo of the estate play space near to Simon's home

In the neighbourhood of the children from Wigmore school, Clissold Park is a large park less than a ten minute walk from their homes. This did not appear within any of the children's activity spaces and none of them stated that they travelled there independently. However, the park still appeared to be an important space for some of the children to visit with an adult, as was its proximity to their homes. A number of children talked about their frequent visits to Clissold Park:

"In the summer I go to Clissold Park and stuff" (Melissa)

"Leo and me have done a lot of things in Clissold Park" (Rowan)

"I've had a lot of water fights with my brother in Clissold Park" (Leo)

Although the proximity of these parks to the children's homes appeared important in enabling them to access to them on foot and often independently, their use of these spaces was quite different to the threshold spaces that were found in and around their homes. The parks may have widened their neighbourhood experience and been an enabler in their explorations of their environment, but in terms of a space for frequent and regular play, this tended to be found much closer to home. The larger parks appeared to act more as somewhere to go, perhaps for a very specific activity, rather than for informal play and leisure. The importance of estate-based public space and play opportunities is also evident in this regard.

Melis (Oakley) and Eva (Oakley) discussed what sort of play space they might like. When I asked them what they might improve about the area nearest to where they live, they responded:

M: You see the grass place that you saw next to my house. We could have a playground there

E: Or maybe they could move all the London Fields equipment to that area. That would be cool

This highlights how although they liked the play spaces in the larger park, they would prefer something closer to home.

Many of the children also had access to smaller and less formal open spaces that were closer to home than the larger parks. Some of the children were able to make use of the threshold spaces right by their homes and some might also travel a short distance to a local play space. It was clear that the proximity of this to their homes was vital in determining their use of this. For the children from Oakley school, there were two play spaces within the estate that they could access (figure 8.21) as well as a ball cage (figure 8.20).



Figure 8.20: Photo of the ball cage on Frampton Park estate, near Oakley school

Warren (Oakley) talked about using all of these spaces on a regular basis and suggested that he was able to freely move between them. However, not everyone felt as comfortable using them. As Melis (Oakley) noted above, for her even having to travel 300 metres to the sand park play space had restricted how much she was able to use it and she, instead, sought somewhere right outside her block that she could use. She was only allowed to go to the sand park playground with an adult and chose not to play in the football cage across the road from here house because:

'that's where all the boys in my class play'



Figure 8.21: Photo of the 'sand park' play space on Frampton Park estate

There were also a couple of spaces that the boys from Wigmore used. Leo mentioned going to the ball cage in a neighbouring estate to play with his older brother and both Rowan and Leo mentioned going to Kynaston Park, a small green space near their school. Going with an older sibling or friend appeared important when visiting these spaces. They were also conscious of others older than them using the space. In relation to the cage, Leo told me how he would try to avoid it if the sixth formers were there and would sometimes specifically go when it was raining in order to avoid them. Wiliam (Oakley) highlighted the importance of positive social interactions counteracting those that he felt more negatively about. He stated that although he got annoyed with the teenagers hanging around, he felt safer because he knew other people in the neighbourhood:

"I know everyone in the neighbourhood so if someone dares touch me my friends will come."

"Once I came over here and they wanted to play with our ball so I let them and they kicked it right up - they kicked it up to the balcony and smashed up the glass and then my friend who is a good teenager went up to get it and I got my ball back"

Parks and playgrounds were a common place for the children to meet and interact with friends. Ashok (Oakley) and Warren (Oakley) talked about playing with friends in the estate play spaces and Warren also said that he would go to Victoria Park with friends from school. That he was allowed to do this on his own appeared to relate to the fact that these were close friends that his mother knew. He stated:

"My mum knows all my friends really well. I don't hang out with bad people. I just hang out with my school friends"

Eva (Oakley) and Maya (Oakley) also stated that they would go to the park with friends, as did Melissa (Wigmore), saying:

"I don't really have play dates inside. I just meet up with them in the park or something and play."

The quality of these parks and play spaces was also an important factor in how much the children used them. The children in the study were of an age where they were beginning to outgrow standard playgrounds and were less interested in using these spaces. Finlay (Wigmore) and Sophia (Wigmore) stated that they did not really go to the playground in Clissold Park and Sophia commented on the fact the she felt too old for playgrounds. When asked about the playground in Clissold Park, she stated:

"There's not much to do. In the playground it's really cramped.... Some of it is boring, where you're older there just doesn't seem to be much stuff to do. Most of the stuff is for younger kids and what they like to do."

Maya (Oakley), similarly, did not appear interested in playing in playgrounds. When given an opportunity to use a play space during the go-along interview, she quickly got bored and was not interested in carrying on. She stated:

"I don't really go to parks anymore. ... I'm too focussed on technology."

Shops

The importance of local shops to the children as part of their neighbourhood landscape and the impact that these had on the children's experiences came up frequently. Most of the children knew many local shops, cafes and restaurants in their local neighbourhood and talked about them a lot (figure 8.22). They tended to be able to state the details of each shop, what it sold and often it's history, demonstrating a good knowledge of these spaces and highlighting the significance of these to them within their neighbourhoods.



Figure 8.22: The variety of local shops that the children visited in their neighbourhoods

First Experiences of Independence

For many of the children, it was the local convenience store or corner shop that gave them their first experience of independence in their neighbourhood. Having a shop relatively close to the child's home and on a walkable route was an important factor in enabling them to take this first step towards independence.

Marianna (Wigmore), for example, was allowed to travel only to the local newsagent and grocery store on her own. These were both around 300 metres from her home. She stated that the shopkeeper in the local newsagent knew her by name and that they would have conversations together. The three boys from Wigmore school also talked about being allowed to go to this same newsagent and for Finlay, this was one of the few trips he was allowed to make on his own. They all lived less than 200 metres away from it. Rebecca (Mansfield) stated that being able to go to the corner shop on her own was one of her first steps towards independence. She lived less than 100 metres from the shop and said that she had been going on her own since the age of seven or eight and that the shopkeeper knew her well:

"The person that works in the place that I go to all the time. The corner shop. He's known me since I was very little and he always calls me 'princess."

The local shop being the children's first experience of independence is further highlighted by two of the girls from Wigmore school. During the first part of the study in winter, both Melissa and Sophia stated that they were not allowed to go to the local shops on their own. In the latter part of the study four months later, they stated that they were then allowed to go to their local corner shop, this being their only independent trip. Again this was located very close to their homes, at around 150 metres away.

Expanded Horizons

For those children who had already been granted wider independence, the experience of visiting the corner shop was still an important one and provided a

range of experiences for the children. Maya (Oakley) tended not to spend much time freely exploring her neighbourhood, but she did go to two local convenience stores. Both located close to her school and less than a five minute walk from her home, these were an important part of the neighbourhood landscape for Maya. During the go-along interview, she stated how she was planning to go to the local shop straight after school that day:

"I need to buy jawbreakers or no-one is going to be my friend anymore. I promised everyone jawbreakers and I ate one yesterday so I have two left. I need to buy jawbreakers"

"Sometimes if you don't have the exact amount but a few pennies less they let you have it for that amount of money. Once I got a lollipop for free."

The local shop acted as an important part of Maya's social landscape within the community, with her feeling that she knew the shopkeeper too. Warren also knew the local convenience store well, as well as the shopkeeper, talking about how the shopkeeper knew him really well and played Fifa with him on the Playstation. He also talked about how he might get things for free, based on this social connection:

"Once I got sweets for free and once my mum got cigarettes for free."

For a child such as Ashok (Oakley), who was granted a relatively wide amount of freedom and independence, the local shops very near his home still came across as important to him and and an important part of his neighbourhood experiences. Unlike some of the other children who may just have one local shop that they were allowed to visit or visit regularly, Ashok had a number of shops he would go to and talked about how he thought he was 'really lucky' as he has a pharmacy, sweet shop and Lidl to go to.

Restricted Mobilities

All of the children mentioned so far had a local shop within 300 metres or less of their home and this proximity to home certainly appeared to be important. Children living in a lower density area are much less likely to have a local shop in such close proximity. For a couple of the children in the study, they had to travel slightly further to get to their local shop but were still able to get there on foot. There was still some positive effect on their experience of their neighbourhood, even if the increased distance meant that they tended to travel with an adult.

Henry (Oakley) had to travel a bit further to his closest shop, which was located on Well Street, a small local high street. He stated that he was sometimes allowed to go the Turkish shop to buy bread for his dad although he did not give the impression that he did this that frequently on his own. He did however demonstrate a rich knowledge of the shops in the street, stating:

"And there's a newsagent and sweet shop and then a fruit and vegetable shops and then everyone knows Tesco. And this one sells lots of brownies and things. Then perfect fried chicken and fish and chicken. And this is a furniture shop. And this is a vegan shop"

Although he might not have had the opportunity to visit all of the shops on his own, the fact that they were in close walking distance and he was able to easily journey there with an adult, still enhanced his knowledge and experience of his neighbourhood.

Zaidee (Mansfield) lived very close to the local high street but was not allowed to go to any of the shops on it on her own. The nearest shop to her was around 300 metres away but required crossing the main road, and the next closest was around 500 metres away. There are various factors that have combined to restrict Zaidee's independent mobility, but having a shop closer to her and away from the main road may have provided an opportunity for her to test out her independence at a younger

age. Zaidee was keen to gain some independence and she appeared to recognise that being able to travel to the shops alone often indicated a first step towards this. When asked about what she would like to be able to do, she responded:

"I would like to go by myself to the shops so that I could get some stuff, some food and stuff by myself."

Although Zaidee was not allowed to travel to the shops independently, she did spend time going to them with her mother and this appeared to enhance her neighbourhood experience. An important part of Zaidee and her mothers' morning routine was walking to a local cafe for her mother to buy a coffee. This was not the closest cafe, but still within walking distance, approximately 650 metres away.

Similarly, Melis (Oakley) was not allowed to go to the shops on her own but she still demonstrated a good knowledge of the shops local to her and also knew the shopkeeper in one of them stating:

"he calls me spicy because I love spicy things."

Simon (Mansfield) had a local convenience store just 200 meters from his home but, unlike some of the other children, he expressed no enthusiasm to go there telling me:

"I only get some milk from there"

He expressed a limited knowledge of the shops in his neighbourhood in general, which seemed reflective of his overall neighbourhood experience.

Community Facilities

There were a range of other community-based facilities that some of the children also used and proximity was clearly an important factor in how they travelled to these

spaces and their use of them. The provision of community halls and easy access to these was important to some of the children. The community hall on the Frampton Park estate was approximately a five minute walk away from all of the children within the study from Oakley school (figure 8.23), as was a church with a youth centre within it. Although none of the children appeared to be frequent users of these spaces, a number of the children mentioned attending these from time to time and their proximity meant that they would always travel on foot to these. Melis (Oakley) was also a frequent user of the local library, which was less than a ten minute walk away from her home.



Figure 8.23: The youth centre near Oakley school

Rafya (Mansfield) mentioned going to a youth group in a church hall just a couple of minutes' walk from his home and implied that one of the reasons for him going there was how close it was and easy to get to. He also attended a maths group in another

community centre not from his home, that he would walk to. Similarly, Rebecca (Mansfield) attended dance classes in a different church hall very close to her home.

Regarding sport and leisure facilities, all of the children from Wigmore school lived approximately a ten minute walk away from the leisure centre, which was also located near a secondary school that hosted activities such as dance and basketball. All of the children in the study from this school attended one of these locations for either swimming, gymnastics, dance or basketball and all of the children usually walked to these.

Some of the children from Wigmore school also attended leisure facilities slightly further away and these highlight the impact that proximity can have on how the children get around. The three boys in the study from Wigmore school all attended a climbing centre, and one attended a kayaking centre adjacent to this. These were located a 20 minute walk from the children's homes, part of which was through the local park. Although Leo said he would always walk to this facility with an adult, Finlay stated that:

"Sometimes when we go climbing we'll drive"

Rowan also stated that:

"I walk sometimes but not much because it's quite far. I normally save my energy for actual kayaking."

Going further afield, Sophia (Wigmore) stated that she regularly attended the local ice rink, but would always be driven there as it was further away (1.7 miles).

Religious activities were also important to a number of the children. Rafya (Mansfield), Ashok (Oakley) and Melis (Oakley) all attended a mosque regularly. Both Rafya and Ashok lived less than a mile away from their mosque and stated that

that they would walk there. Melis noted in her travel diary that she would usually travel to the mosque by car, perhaps due to attending with other family members.

Friend's and Family's Homes

For some of the other children, other people's homes were important locations to meet others and socialise. Although both Rafya (Mansfield) and Ashok (Oakley) had a reasonable amount of freedom in the public spaces within their neighbourhoods, they also talked about spending time in other people's homes in the local area and both appeared to have strong social and family networks that enabled this. Rafya had a number of close family and friends living nearby to him. He noted that his auntie and cousin live down the road from his house and that he would often visit them. Ashok was similar with a number of family members living nearby.

"[My auntie]... lives up there on Holcroft Road and that's my mum's older sister. Over there is where my grandma lives with my youngest auntie and my uncle and his two children. One of my aunties lives in Ilford and one of my aunties lives right next to me just two blocks away."

He talked about going to visit them in their homes, but less about spending time outside with them in the neighbourhood. The fact that these family ties were close by enabled these children to be able to travel actively, and often independently, to these homes.

Some of the children in the study talked about friends and family living further afield and this changed the nature both of visiting them and how they experienced their neighbourhoods close to home. Henry (Oakley) stated how, aside from the children that he knew on his street, his other friends didn't live locally. This meant that if he wanted to visit them, his parents would have to take him there. This was quite a different experience to Ashok, for example.

Rowan (Wigmore) stated how lots of his school friends had either moved away or changed school and understood how this impacted on his neighbourhood play experiences.

"A lot of people have moved away because it's quite expensive this place now - it's quite posh. So I only play out often with Leo because half of my friends don't even live in Stoke Newington - they live on the outskirts."

He noted that it would take him 30 minutes to walk to some of his friend's houses and this meant that he would not get to see them on a regular basis or would have to be driven there by his parents.

Natural Spaces

The urban setting that the children were living in is reflected in their use of space and the destinations that they tended to visit. Even if the children had wanted to, there was nowhere for them to engage with the wilder elements of the natural environment such as the mountains or the sea. There was no river nearby that the children could play in, in comparison to the children in Hart's (1979) study had, who lived in a less urban setting. These spaces simply did not exist in the neighbourhoods in which the children lived. Landscaped parks and greenspaces were the closest that the children got to being able to engage with the outdoors and nature.

Given this context, it is unsurprising that the children's engagement with the natural environment was low and that they were more drawn to visiting indoor spaces or managed outdoor spaces, such as parks. This reflects findings from Derr (2002), that showed it was those children with greater access to natural places that were more likely to use them and to have the most in-depth experiences with nature. This is in spite of just four of the children stating that they prefer to spend time indoors. The children still had access to some forms of nature in their general living environments, whether that was within managed parks, grass verges, or threshold spaces near their homes, but they did not see the natural features of these spaces as

destinations in their own right. The lack of nature in their neighbourhoods did not seem to impact on their experiences of place. In fact, it was the children who had experienced more immersive nature in other places, such as on camping trips, that appeared to be impacted the most by the lack of these opportunities in their neighbourhoods. As Rowan said about camping:

"You can roam free because there's a forest. So we tend to go in the forest. And sometimes we play hide and seek"

He appeared to miss this feeling when coming back to his neighbourhood in Hackney.

Conclusion

The destinations that the children spent time in within their neighbourhoods tended to either be parks or play spaces, shops, community facilities, friend's and family's homes and their school. Whereas the children's use of threshold spaces were on a more informal basis, many of the children's trips to these destination spaces were more formalised and pre-planned. Although trips to the local shop and to school often took place independently, trips to other destinations were more likely to take place supervised and in a planned way.

Larger parks often featured on the edge of a child's activity space, but the children's usage of these spaces was less frequent than destinations closer to home. If there were smaller parks and play spaces available closer to home then the children would often use these instead and were able to talk more about their experiences in these spaces. The children did not always appreciate the provision of formal play equipment and were also looking for other opportunities for play within the spaces, highlighting the need for flexibility and adaptability in the use of a space to be able to accommodate a wider range of users. It shows that traditional play spaces can have a limited appeal and do not always meet a child's needs, as also discussed by Woolley (2008) and Rasmussen (2004). The social aspect of these spaces was

important, with children choosing to use them with other children of the same age and that they knew. Older children and teenagers that they did not know often put them off using these spaces.

Local shops formed an important part of the children's neighbourhood landscape, highlighting the relevance of commercial space to children, as has been shown in other studies (Loebach and Gilliland, 2016; Brussoni et al, 2020). This study explores this theme in depth and shows that the trip to the local corner shop is often one of their first steps towards children's independent travel. The proximity of them to home and the ability to access them on foot had an impact on how frequently the children would visit them and whether or not this was done independently. The social connections that the children often made with the shopkeepers was also an important element of their wider social network.

Community facilities and friend's and family's homes also played a role in the children's neighbourhood landscapes. Most of these spaces that the children talked about using on a frequent basis were located close to home and within a walking distance, though children were more likely to be accompanied to these. For destinations further away, the children were less likely to walk and more likely to travel by car or public transport.

Children's use of natural spaces and their connection to nature was low, with just one of the children suggesting he saw the natural features of a space as a destination in its own right. This appeared related to the accessibility of natural space in their neighbourhoods. There were natural features evident, but there were no rivers or mountains within them. Although the children's connection to nature and use of the natural environment was weak, it did not appear to impact on their enjoyment of their neighbourhoods, and it was the social elements of spaces that appeared most important to them, as has also been found my Matthews et al (2000).

The Influence of the School

Another important feature of the children's neighbourhood was their school, these being an integral part of the children's everyday lives (Collins and Coleman, 2008). Schools had an impact in a number of ways. Their setting and location was of relevance. The school's travel policies also had an obvious impact on the children's travel behaviours. Other potential influences of schools on children's behaviour related to school policies on children's independence and freedom within the school, which also related to risk taking and the outdoors, as will be discussed.

School Location

All three of the schools in the study were located in locations with reasonable quality transitory spaces surrounding them. Two of the schools in the study were located on main roads (although entrance points were located to the side on quieter residential streets) but this did not appear to act as a barrier to the children walking. Following the earlier discussion on the quality of transitory spaces, as long as there was a suitable footway and appropriately placed crossing points, which there were, the children were able to travel actively to them.

The location of the children's schools and, in particular, their proximity to their homes was an important influence on how they travelled to school. The findings from the study support a range of other evidence demonstrating that the closer a child lives to school, the more likely they are to walk (Davison and Lawson, 2006; Ewing et al, 2004; McMillan, 2007; Panter et al, 2010; Timperio et al, 2006; Trapp et al, 2012; Giles-Corti et al, 2009; Oliver and Schofield, 2010). All but one of the children walked to school and all but one lived a ten minute walk or less away. The proximity of their home in relation to the school was clearly an influencing factor on this and this is particularly evidenced by Montel's (Mansfield) experience.

Montel (Mansfield) lived the furthest away from school of all the children in the study, living approximately 1.6 km away. This is below the average UK distance a child may

travel to school, but still higher than most of his peers. During the go-along interview with Montel, although he had been told that we would be taking a walk around his neighbourhood and towards his home, from early on it was obvious that this was not his normal routine. Initially he was nervous to admit this, stating:

"Sometimes I walk by myself. Sometimes I walk, sometimes I take the bus"

Montel found it much more difficult to navigate to his home and back by walking than the other children in the study and it gradually became evident that his knowledge of the neighbourhood between his school and his home was poorer than others.

I: Why don't you show us which way you'd go to school if you walk?

M: Let's go this way [heads towards main road and bus stops - slightly away from school] You've just got to go up here and go straight and then you can see the cinema

I: So is that the way you go if you walk?

M: Yeah

Following on from this and on arrival at the bus stop on the main road, Montel finally admitted, one hour into the walk

"Yeah I always get the bus"

The increased distance that Montel had to travel to get to school is likely to be what led to him taking the bus to school. This wider distance between home and school and travel by bus also meant that he had effectively ended up with two activity spaces, one around his home and one around his school. When looking at the children's activity spaces, the location of their school is clearly an anchor in determining where they will go in their neighbourhood and this was the same for Montel. As his home was located further away than the other children from school to the south, he lived very close to many of the children who attended Oakley school. When his activity space is compared to theirs however, it is quite different. Whereas

the children from Oakley school tended to spend time further south, Montel's activity space spread only to the north of his home, as shown in figure 8.24.

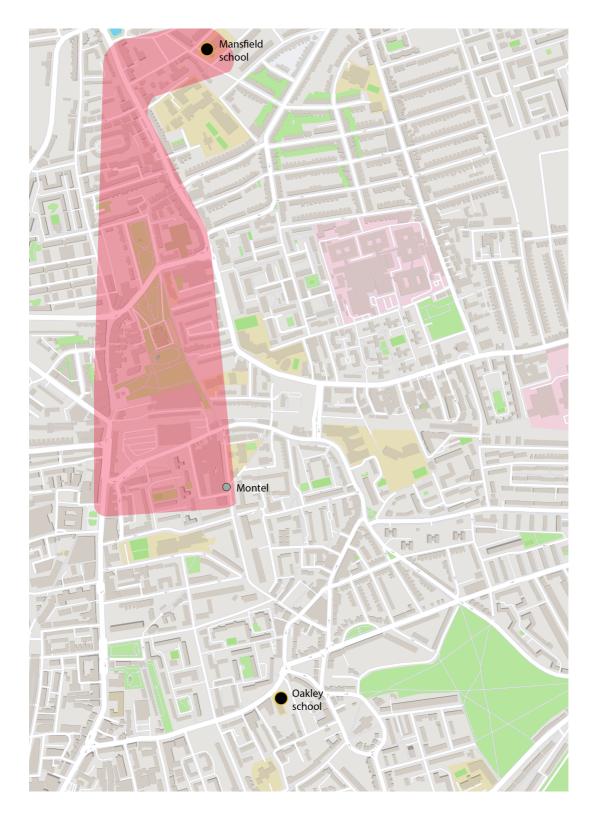


Figure 8.24: Montel's activity space and the locations of Mansfield and Oakley schools

This point is important when considering Simon's use of his neighbourhood. Although his independent activity space was confined to his home, his knowledge of his neighbourhood and the time he spent within it with this mother was mostly linked to his journeys to and from school, as he took part in minimal other journeys. Living on a busy roundabout and near a main road, if the school had been located in the opposite direction from this it may have reduced the impact that this busy junction had on his mobility.

Active Travel Policies

The school's policies on active travel were also found to have a role to play in influencing the children's neighbourhood mobility. All three of the schools in the study were supportive of walking, in particular, and it is suggested that this positive support from the schools for this effectively gave permission to the children to travel in this way.

At Mansfield school, there was a strong focus on reducing car usage, which came across clearly at the beginning of the interview with the deputy head teacher. The school had recently put in place a scheme called 'school streets', enabling the school to be able to close the road to motor traffic at the start and end of the day (figure 8.25). When asked about the children's travel patterns, the deputy head noted:

"Car use has definitely gone down because you can't park outside the school so more people are being forced to walk."



Figure 8.25: Photo of the school street signage at Mansfield school

At that time, this perception wasn't backed up by the school's own travel survey, which suggested that the number of children travelling to school by car had remained fairly stable since the intervention at around 7%. A further update on its impact has not been possible unfortunately. Research on the impact of school streets is limited, but a report by Hopkinson et al (2021) suggests they can lead to a mode shift of 3-6%. Where levels of car travel are already low however, this might be harder to achieve.

It may also have been that parents were still driving but dropping off their children outside of the restricted zone or that exempted vehicles from local residences were still driving through. When visiting the school at the end of the school day, there were still a lot of cars driving in the area and it did not feel as traffic free as the deputy head teacher had implied. As one of the children, Rebecca, noted when asked what impact the school streets scheme has had:

"I kind of feel safer but some people go against the rules so sometimes I don't"

At Wigmore school, the motivation to reduce driving to school was driven by a campaign to reduce the air pollution effects from the main road next to the school, which the children were very aware of. When asked about what they thought was a problem in their neighbourhood in the first workshop that the children took part in, they all responded to say "pollution." Although this campaign appeared to have an impact on some of the children's behaviours and their awareness of the impacts of air pollution, it relied upon a change in motivation and a willingness to change travel habits. This appeared to reduce its effectiveness and perhaps had more of an impact on some of the children's views than their parents. As Sophia noted:

"but if my parents are in a rush they usually just drop me off in the car. Only if they have to"

It should be noted that since the fieldwork for the study took place, Wigmore school has also implemented a school street scheme, restricting motor vehicles on some of the residential roads used to access the school, and a bus gate is due to be implemented on the main road to restrict through traffic. Although the residential streets were already relatively low traffic, this may have an impact on travel choices such as the one noted by Sophia above.

The deputy head at Oakley school had less to say about active travel, but it was still the case that levels of car travel to the school were low and as he noted "most children walk" anyway. Again, since the fieldwork took place this school has also implemented a school street scheme on the minor road next to its entrance, though no changes have been made to the major road that also runs past the front of the school.

Independent Travel Policies

Another school policy that had an obvious impact on the children's travel behaviours was to do with children's independent travel and policies on this differed between the three schools in the study. At Mansfield school, the deputy head stated that children could travel without an adult in year 5 and 6 with written permission from a parent. The responses from the class survey reflected this, showing that across the whole of year 5, 51% travelled with an adult to school and 65% travelled with an adult from school. Some of the children in the study appeared aware of the school's policy. As Rebecca noted, when asked about when she was allowed to go to school on her own:

"Since year 5, because I don't think you're really allowed to do it in year 4"

Rafya, on the other hand, appeared to have challenged the rules in the past, stating:

"I started in year 3. Two years ago. Because my mum had an operation on her back and she couldn't take me to school anymore"

The policy appeared similar at Oakley school. The deputy head teacher at the school stated that it was rare that they would allow a year 5 child to go on their own without an adult to or from school, though he also noted that:

"A parent could push it through and we wouldn't be too strict about it unless there was a concern"

This position is reflected in the results from the whole class where there is a mixed picture of children travelling to school with an adult or not. 61% of children stated that they travelled with an adult to school, and 67% from school.

At Wigmore school, their policy was that children were not allowed to travel on their own and this appears strictly enforced. When the teacher at Wigmore was asked about children travelling to or from school without an adult she stated:

"Only in year 6 as long as they have parental consent"

She stated that the teachers would not let children leave the school without an adult if they were in year 5 or below. The whole class survey results showed that the Wigmore policy had an evident impact on children's independent travel, with 96% of children saying that they travel to school with an adult and 91% of children saying that they travelled home with an adult.

As Rowan said:

"The school says we aren't allowed to walk there by ourselves and that's the school rule".

School Attitudes to Risk and Independence

The children's schools also appeared to have an influence on them in relation to more general attitudes to both risk and independence. Oakley and Mansfield schools had quite contrasting policies in this regard and will be used as a comparison to explore the impact of these policies on the children's behaviours.

Oakley school came across as the most risk averse out of the three schools in the study as well as taking a very controlled approach to the school day and how the children's behaviour was managed. This was clear even in their approach to adults visiting the school and, from my first experience at the school, where I was greeted quite formally. In none of my visits was I allowed to find my own way to the room I was using, having to be escorted by a member of staff. This appeared to mirror how children in the school were treated and contrasted to my experience at both

Mansfield and Wigmore school where I was given a lot more freedom and was trusted to find my own way around.

With regard to school playtimes, the deputy head stated that they were very structured at Oakley school and that running around was discouraged. He talked about how there had been accidents in the past, meaning that they now considered it too dangerous to allow too much running and playing. As the children themselves said in the workshop with them:

H: We're not allowed to run

E: We're not allowed to run inside the playground. It's against the rules

M: When the apparatus in the main playground was there, we weren't allowed on it, because apparently it was for the year 3s. We're not allowed to play stuck in the mud, we're not allowed to play 'it', we're not allowed to play 'hit and run'

A: I got put on the wall for running

I: And do you know why that is?

H: Because apparently the playground is too small. Even though it's humungous

The deputy head stated that they would particularly restrict running when it was slippery and wet. When asked specifically about whether children were allowed to play outside in all weathers, he said:

"if it's spitting it's fine but it depends on puddles and how slippy it is. If it's raining we'll have indoor play."

The children were also not allowed out to play in the snow. This was evidenced during one of the fieldwork sessions, which took place at the school just after it had snowed and where the children had not been outside.

In comparison, Mansfield school appeared much more supportive of the children taking risks as well as putting an emphasis on empowering them and giving them independence within the school. As a UNICEF rights respecting school, the deputy

head teacher said that they believe that children's rights are important and this was evident in the respect that teachers showed the children throughout the school. Small touches, like addressing the teaching staff by their first names, helped to reinforce this. As the deputy head noted:

"Independence is at the core of what we do."

Mansfield school encouraged children to take control of their actions and behaviours and when in the playground, their attitude was:

"If you fall down, get out there and dust if off."

The children were expected to go outdoors in all weathers and the school encouraged outdoor learning. The deputy head stated that they were happy for children to climb things in play times and take risks. She did not see this as a problem for the school or with regard to health and safety as long as the children were supervised and certain rules were followed, such as equipment being in the correct place and padded floors where necessary. As she said:

"They will fall but they need to learn to get up again."

The strength of the school's policies on both risk taking and independence at Oakley and Mansfield schools had an impact on the children's sense of control at school and their contentment. The children in the study from Oakley school appeared frustrated about the school's policies and how they were restricting their play and freedom within the school. Maya (Oakley) was quite vocal on the matter, stating:

"They need to listen to children's rights. When we line up, we're not even allowed to go toilet, to get water, we're not allowed to do anything."

Eva (Oakley) wished they could play more games in the playground with less rules. Maya (Oakley) asked for more time when they could "just play" and complained that it was "really, really strict." When the children were asked if they were happy with the amount of choice they got about what they did each day in school, all of them stated "no."

The children from Mansfield school, who were given more freedom within the school, appeared less frustrated but were still not always content. Three out of five of the children also said that they were not happy with the amount of choice they got at school. When the children were asked how often they were allowed to do what they want at school, three out of five answered 'never' and two answered 'some of the time,' which was a similar response to the children from Oakley, where four out six answered 'never' and two answered 'some of the time.' The children's perceptions of freedom and how this can differ to what the teachers and school see as freedom was also highlighted. For example, 'freedom' to go outside in all weathers isn't seen as freedom to all the children. As Zaidee noted:

Z: Sometimes they do it too much, because when it's really cold they still make us go outside.

I: And you'd rather stay in?

Z: Yes it's more warm

None of the children in the study, even at Mansfield, which supported children's autonomy the most, stated that they had freedom to do what they want at school most or all of the time. The children still felt controlled to some extent, even at the school that prided itself on giving children independence and feeling in control. Perhaps this is to be expected, given the evidence that school is generally a controlled environment where children are taught to behave within certain boundaries (Fielding, 2000; Holloway and Valentine, 2003; Catling, 2005). It suggests that even if children in school are given relative freedom to play in break times and are given elements of independence within the school day, there are still other controlling elements of school that affect how much freedom they feel that they have. How freedom is perceived and the difference in perceptions between child and teacher has also been highlighted. Ultimately the school is adult controlled and

although the children at Oakley school appeared more frustrated with the policies put in place to control their behaviour, it was clear that even those children in Mansfield school did not feel the sense of freedom or independence that the school and its policies implied.

Outside of school, children are no longer bound by the rules within school and there are other influences that shape their behaviour. There was a recognition shown by the children in the study of this difference. Whereas only five of the children stated that they were happy with the choices they got each day at school, this increased to 12 children when thinking about the choices they got outside of school.

Using the findings from this study, it is difficult to ascertain if there is an impact on school policies on independence in children's lives outside of school. There is evidence from other studies that ignoring the need for independence in school reduces the likelihood of feeling safe, secure and competent in the school setting (Catalano et al, 2002; Rubin, 2012) and that creating a positive school environment can have a positive effect on relationships within school (Wilson et al, 2010). It is suggested that the sense of lack of control that the policies at Oakley school gave the children when they were at school and the increased level of discontentment that they showed within school may have an impact on the children longer term and how they interact with their neighbourhoods, but further research would be required to explore this relationship fully. This would link to Proshansky and Fabian's (1987) point that the school setting can influence children's behavioural strategies. It is also evident that some of the effects are not from any individual school policies, but from the setting of the school itself and the adult controlled environment on which it is based.

Conclusion

The study showed that proximity of a child's school to their home will influence how a child travels to school. This reflects other research that has consistently found the proximity of school to a child's home to be one of the most consistent predictors of

active travel (Davison and Lawson, 2006; Ewing, Schroeer and Greene, 2004; McMillan, 2007; Panter et al, 2010; Timperio et al, 2006; Trapp et al, 2012; Giles-Corti et al, 2009; Oliver et al, 2010; Mitra, 2013). All but one of the children in the study usually walked to school, and this is deemed to be due to the school's close proximity to the children's homes. School has also been shown to influence the area that a child will define as their neighbourhood, which tends to to cover the space between home and school.

School policies supporting active travel also appeared to influence the children's behaviours, by impacting social norms and perceptions of how to get around. However, it was also evident from the feedback on Mansfield's school street policy, that influencing these social norms and perceptions can take time and if immediate change is expected, then stronger enforcement may be required to ensure that policies are adhered to.

The school policies that had the most obvious impact on the children's mobility were those related to children's independent travel behaviours. Where his policy was strictly enforced at Wigmore school, with children not being allowed to travel to school on their own until year 6, there were very low levels of children going against the rules and travelling independently in year 5. Based on their behaviour and travel choices, most parents seemed willing to accept these policies without challenge and this had a clear impact on children's travel patterns, something that is not known to have been explored before in the literature.

The influence of the children's school on their travel is also likely to have an impact on their wider neighbourhood mobility. The fact that most of the children were able to travel on foot to school, meant that any journeys that they made after school also tended to be on foot. The term trip-chaining is often used when talking about parents combining trips to drop off their children to school in the car and then driving on to work or to complete other tasks (Hensher and Reyes, 2000). The same principle can be used in the case of the children's travel to school. As the children in the study

showed, leaving school on foot meant that they also then took part in any afterschool journeys on foot when they were within walking distance.

The influence of the children's school has also been shown to form a part of a child's journey towards independence. Although the impact of school policies on the children's wider neighbourhood mobility is unclear, it was evident from the study that school policies on children's freedom and autonomy had an impact on the sense of control that the children felt they had during the school day.

Summary

The children's use of their neighbourhoods and the third places within them interacted and influenced each other so that a child's experience in one would influence the other and begin to create a network of experiences within a child's neighbourhood. The evidence from this study shows that it was often use of the threshold spaces outside of a child's home, which were the start point for their wider experiences of their neighbourhood. The use of these spaces would enable a child to build confidence and motivate them to then explore further afield. Affordances for play in these spaces helped to support a child to use them, though these were individual based on the child's preferences, as did the presence of other children of a similar age. These spaces needed to feel safe and have a primarily place function rather than a movement one.

Once moving away from the threshold spaces outside of the home, then the quality of the transitory spaces and the street network become important. This was important for all children, but particularly those who did not have a suitable threshold space to use, as it was then these transitory spaces that enabled their initial neighbourhood explorations. The convenience of the routes that these spaces created and how safe they were perceived, impacted on how children used them. Children in the study travelled mostly on foot and this appeared linked to good connectivity on foot and it being better than by car. Footways and formal crossing points supported the children's mobility and they were happy to walk along a road with a footway in place and cross a busy road if there was a crossing point. The presence of these were likely to influence perceptions of safety, which were shown to be an important influence on how the children used these spaces.

The use of transitory spaces was also influenced by the children having a place to go to. Destination spaces that the children used and travelled to on foot tended to be in reasonable proximity to their homes. Parks and play spaces were the most talked about and frequented, but community facilities, the local shop and friend's and family's homes were also important in the children's neighbourhood landscape. The

local shop was, for a number of the children, the first destination that they were allowed to travel to independently. The social element of these spaces was again important. Having someone to use these spaces with was important and the children often did not feel welcome if there were other older children that they did not know in a space. The children's school was also found to be an important influence on children's neighbourhood mobility, both in relation to its location and proximity to the children's homes, as well as in relation to the school's policies on active and independent travel.

The findings from the study suggest that standard measures of walkability (Southworth, 2005) may not always be as relevant to children as to adults. Although a number of features of walkability were relevant to the children, such as a high degree of proximity, mix of land uses and a network of footpaths, perceptions of safety and the ability to have a social and sensory experience in a space were of heightened importance for the children. The relevance of children's use of threshold spaces and their influence on children's wider mobility has also been shown. This links to Carroll et al's (2015) assertion that, for children, the public spaces within the neighbourhood are for more than just getting around. They form a part of children's everyday life and, as such, a more holistic consideration of how they use them is required.

CHAPTER 9: Discussion

This study has provided an in-depth account and analysis of children's experiences in three East London neighbourhoods. It has taken a child-centred approach in order to try to fully understand what children do in the public realm in their neighbourhoods, how they feel about using it and how it impacts on their well-being. This is based around the main research question of:

How do children use their neighbourhoods and what factors are important in influencing their experiences?

This final chapter sets out the conclusions of the study, bringing together findings from the previous chapters and addressing the research objectives. It begins with a discussion of the main forms of children's mobility found within the study. It then goes on to consider how the different factors that influence children's neighbourhood mobility. It links to understandings around socio-ecological models to pull out the different levels of influence, and also draws on understanding of Complex Adaptive Systems (CAS) to consider how these factors interact and influence each other.

Finally, it also considers the findings in relation to children's well-being. It suggests that there may be a link between children's physical and mental well-being and their neighbourhood mobility that warrants further exploration. The main conclusions are then followed by policy implications of the research and ideas about how the findings could be built into future research.

Forms of Mobility

The children in the study had relatively high levels of neighbourhood mobility and often contradicted narratives around children's loss of freedom (Gill, 2007). They all walked a large amount of their journeys with many also spending time playing in their neighbourhood spaces. Though they had varying amounts of freedom, the majority of the children in the study had some autonomy over their actions in their neighbourhoods. The children are not necessarily reflective of wider children's mobility across the UK, but their behaviours were shown to be reflective of their school cohorts and it is suggested that they could be reflective of children's mobility in inner London and potentially other dense urban areas in the UK.

These relatively high levels of walking set the scene for the children's neighbourhood mobility. For the most part, they knew their neighbourhoods well and were confident travelling around them on foot. Mitra (2013) has suggested that it is the repeated exposure to the neighbourhood environment that helps a child to develop the physical and cognitive abilities to be able to navigate their way around. Conversely, when children travel by car or public transport they tend to have a much poorer knowledge of the space that they travel through (Mitchell et al, 2007; Badland, 2012). The children did not necessarily have large activity spaces, but they were active in their neighbourhoods nonetheless. The importance of the intensity of use of the children's activity spaces and the quality of time they spent in them was shown over and above the size of these spaces, as has also been highlighted by Christensen et al (2017). Some children did still seek more independence and their activity space may have not been fully realised (Babb et al, 2017), but there was minimal evidence of the backseat generation (Karsten, 2005), with very few of the children's trips being with an adult in a car.

Within these relatively high levels of walking were a range of different forms of neighbourhood mobility. The study describes a range of different *types* of childhood experience, with variations along the spectrum of structured/unstructured time and autonomous/controlled time, building on the work of Kyttä (2004) who broke down

children's experiences into the four domains based on their degree of independent mobility and the number of actualised affordances (figure 9.1). Some children had a high amount of unstructured time, where they would spend time outside of a specific setting playing or spending time in their neighbourhood. Other children had a high amount of structured time, usually in an organised setting in a fixed space in their neighbourhood.

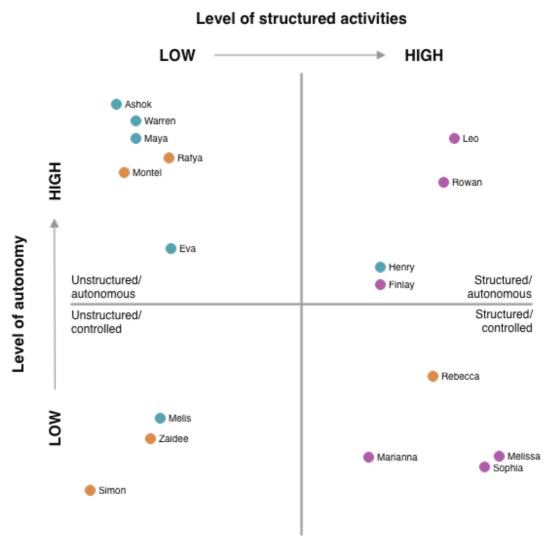


Figure 9.1: Model showing the different forms of neighbourhood experiences that the children had

Evidence from this study suggests that it was those children within the unstructured and controlled domain that had the poorest neighbourhood mobility and neighbourhood experiences. Structured time as part of a child's daily routine was

found to be beneficial in children's developing neighbourhood mobility, particularly when combined with autonomous time, challenging concerns around the overscheduled child and reflecting arguments made by Holloway and Pimlott-Wilson (2018), it was the under-scheduled child in the study, with only controlled and unstructured time, who the concern needed to be focused on. Structured time was also more common in the white, middle class children in the study, though it was challenging to disentangle the different influences of social class, ethnicity and the child's neighbourhood, as Thomson and Philo (2004) also found in their study.

The children's independent time in their neighbourhoods was shown as a journey and the children's lives and experiences demonstrated a gradual transition towards full independence. The measure of children's physical independence has been challenged through findings from the study, and it is suggested that understanding how children feel about their neighbourhood mobility and how much autonomy they have over their decision making may be a more relevant measure of their neighbourhood freedoms. This draws on the work of Mikkelsen and Christensen (2009) who have previously highlighted the complexity of children's mobility.

Space, Permission, Motivation

The study has maintained a strong focus on the neighbourhood level and how this influences children's behaviours and experiences, taking a child-centred approach to the work. The findings have highlighted that the physicality of the neighbourhood does not function in isolation in terms of its influence on children. Instead, the neighbourhood 'space' is just one factor that plays a part in determining what children do. The study has also considered the other factors, in addition to the built environment, that influence how children use and engage with it and the interactions between these factors, drawing on understandings of socio-ecological models (Brofenbrenner, 1999) and CAS (Glouberman et al, 2006). This has enabled a detailed consideration of how a child's neighbourhood and their experiences within it influence their behaviour

A range of other factors have been identified, aside from space, that influence children's behaviours in their neighbourhoods and these have been weaved into discussions of the main findings of the study in chapters 7 and 8. These cover social, political and individual factors. In terms of their influence on the children's behaviours, these can be grouped under the themes of permission and motivation. The study has shown that, even if a child has a space that they can use, if they are not permitted to use it or do not feel motivated to use it, then the intended function of the space will not be realised. That is not to say that the design of the space is not important, but that those factors that influence the use of the space must also be considered. How the space itself impacts on permissions and motivations for use must not be forgotten. The interaction of these factors in the context of this study is shown in figure 9.2.

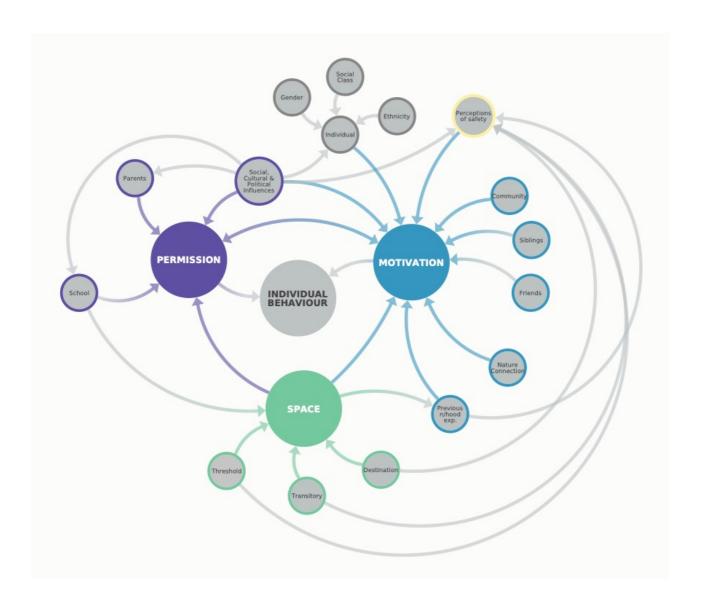


Figure 9.2: Systems map of factors influencing children's neighbourhood mobility

Space

The public spaces in their neighbourhoods are important to children. The framework of third places has been used to help to differentiate the types of places that are important to children and to help to understand how they use them (Carroll et al, 2015; Gardner, 2011; Oldenburg, 2001).

This study has found that threshold spaces, or the places outside the front door, are important for children to be able to play in and around their home and that these can help to encourage autonomous play. For these to work for all children, however, the

quality of these spaces is important to consider. This firstly relates to whether or not a child is motivated to use the space, often driven by the potential for social interaction within the space, as has been found in other studies (Brussoni et al, 2020, Horton et al, 2014; Biddulph, 2010; Bornat, 2016). This links to cultural norms around the presence of children in public space, which may have an influence on the number of children using these spaces for outdoor play (Wood, Bornat and Bicquelet-Lock, 2019). Secondly, whether or not the child is permitted to use the space is important, often driven by parental perceptions of safety, linking to other research in this area on the design of cul-de-sacs, which can create a feeling of safety and security (Hochschild, 2013). The importance of the potential for overlooking in threshold spaces was also shown (Whitzman and Mizrachi, 2012). Some of the children in the study had threshold spaces that they could use, but chose not to, as they were not motivated to use it, or they were not allowed, and this appeared to be due to how the quality of the space was perceived. The study also demonstrates how threshold spaces can act as a first step towards a child's wider independent mobility and exploration of their neighbourhoods, adding to the literature in this area and highlighting the benefits of these spaces not just for play but for children's wider neighbourhood mobility.

How children use threshold spaces highlights the importance of seeing the development of a child's neighbourhood mobility as a journey and as a gradual transition process. Although the children were able to take part in autonomous play in these spaces and to start to build the confidence to use their neighbourhoods more widely, there was always an element of dependence as there was usually a parent present at home to help out as needed. There was a sense of these spaces enabling a gradual building of confidence to move further away from the home to more full independent mobility. Children in the study would always use threshold spaces with an adult present at home and they enabled the child, and their parent, to start to feel confident in being out in the public spaces in their neighbourhood. Those children that did not have threshold spaces that they used often felt less confident in exploring their wider neighbourhoods and had more restricted freedoms.

Transitory spaces, or the places between places, were also shown to be important in how the children were able to get around a place. Children in the study were all living in high density inner London and footways and crossing points were relatively commonplace. Their use of these highlighted the importance of having this infrastructure in place to ensure that journeys made actively by the children and not in a vehicle were convenient and that they were perceived to be safe, both by the children themselves and their parents. Footways, crossing points, good connectivity on foot and pedestrian only routes increased how convenient walking was, reflecting previous research in this area (Davison and Lawson, 2006; Timperio et al, 2006; Whitzman and Mizrachi, 2012; Villanueva et al, 2012). They also needed places to go within close proximity, providing important evidence to support the idea that more compact, and therefore walkable, neighbourhoods lead to more active travel for children (Carroll et al, 2015; Villanueva et al, 2012; Carver et al, 2014). When compared to travelling by vehicle, where walking was the most convenient choice, the children in the study would tend to choose this mode. This is demonstrated by the fact that very few of the children's trips were in a car and, when they were, it tended to be because the car was seen as being more convenient than walking. All of the children had started out using these transitory spaces with an adult. Their gradual transition towards independent mobility was highlighted in the study in their use of these spaces.

Destination spaces, such as parks and shops, were also shown to be important to the children in the study and reflected the need to be able to use transitory spaces to access these. The range of spaces accessed by the children, and their dismissal of formal play spaces in a number of instances, reinforces the point that playgrounds are not the only public space for children (Cooper Marcus and Sarkissian, 1988; Woolley, 2008; Rasmussen, 2004). The importance of proximity of these spaces was shown in order for the children to be able to travel actively to get to them and to visit them frequently, as has been demonstrated in a number of other studies in relation to school travel specifically (Davison and Lawson, 2006; Ewing, Schroeer and Greene, 2004; McMillan, 2007; Panter et al, 2010; Timperio et al, 2006; Trapp et al, 2012; Giles-Corti, et al., 2009; Oliver et al, 2010) and, slightly less comprehensively,

for other destination spaces (Sharmin and Kamruzzaman, 2017; Brussoni et al, 2020; Loebach and Gilliland, 2016). The social element of these spaces was also shown to be important and the potential for social connections. It was this element of the spaces that was more significant than any natural features, which were not prominent in the children's experiences. The importance of both the children's school location and its policies on active and independent travel were also shown to be important influences on the children's mobility.

How the children in the study used these third spaces raises questions around the notion of activity spaces and the relevance of walkability, considering how these should be measured and the complexities involved (Weller and Bruegel, 2009). There is a tendency to assume that a larger activity space is better but this did not appear to always be the case. Analysis of the size of the children's activity spaces was found not to reflect the importance of the quality of the space itself or the time spent within it. This raises important questions around how children's mobility should be measured. A smaller activity space does not necessarily denote poor neighbourhood mobility. It can instead reflect that a child has everything that they need in close proximity to their home. Han et al (2020) note that a child's activity space is a reflection of the proximity of destinations. With proximity being an important indicator of how a child will get around, this should be seen as a positive attribute, not a negative one. It links to recent themes around 20 minute neighbourhoods (TCPA, 2021) and the importance of having facilities close by, reducing the need to travel or the need to have a larger activity space. Measures of walkability take into account the importance of proximity (Southworth, 2005) but otherwise take an adult-centred view to how third spaces might be used in a neighbourhood, focussed predominantly on getting around. As the findings from this study show and has also been suggested by others (Carroll et al, 2015; Villanueva et al, 2012; Carver et al, 2014; Horton et al, 2014), children use these third spaces in a variety of ways and their experience within the space is as important as being able to get from A to B.

Permission

Although the spaces themselves are important, a child will not use a space if they are not permitted to do so. Understanding how the design of the spaces influence permission granting is important, but there are also other broader factors in relation to permissions that need to be considered and that impact on what the children in the study felt they were allowed to do, that link to their parents, their school and social perceptions around children's use of public space.

Parental permission is the main form of permission that children require to be able to use their neighbourhoods as they wish (Vlaar et al, 2019). This study, and many others (Timperio et al, 2004; McMillan, 2007; Kelty, Giles-Corti and Zubrick, 2008; Carver et al, 2008; Veitch et al, 2006; Loebach and Gilliland, 2016; Alparone and Paccilli, 2012; O'Brien et al, 2000), have found that this is strongly related to subjective perceptions of safety. Many of the parents in the study did allow their children to walk most of their local trips and one of the reasons for this appeared to relate to them perceiving it to be safe to do so. Having friends nearby acted as a motivator for the children to want to use their neighbourhoods, but also appeared to effect whether or not they would be granted permissions from their parent, linking to other research suggesting that parents perceive a space as safer when there are other people using it that they know (Lee et al, 2015; Veitch et al, 2006; Karsten and van Vliet, 2019; Karsten, 2005; Weller and Bruegel, 2009). Linked to this, is also the cultural influences on parents on whether or not it is the right thing to do to let their children out in the neighbourhood (Vlaar et al, 2019). An example from this study is where parents stated that they were more likely to let their children walk to school on their own than play outside on their own, seemingly reflecting different cultural perceptions around travel behaviours and play and what they perceived was safe to allow their child to do. Parents were also more likely to grant permission if the child had an older sibling, reflecting other similar findings (Ayllón et al, 2019; Christian et al, 2016; Mackett et al, 2007), and suggesting that perceptions of safety shift as the parent better understands the risks.

Parental permission to use one part of the neighbourhood did not mean that permission was granted to go everywhere in the neighbourhood and parental permission took different forms. Permission varied throughout the year, with many of the children not being permitted to go outside without an adult after dark, meaning their mobility during the winter months was more curtailed. This also appeared to be influenced by social norms around going out after dark and perceptions of safety, as also shown in findings from Shaw et al (2015) when comparing children's mobility across countries. The local corner shop was often one of the first places children were permitted to travel to independently, which appeared to be due to its close proximity to home and parents perceiving there to be a safe route to reach it. Other studies have shown the importance of commercial spaces such as shops and cafes for children's mobility (Loebach and Gilliland, 2016; Brussoni et al, 2020), but have not provided such in-depth insights into the relevance of the corner shop specifically.

Signals relating to children being permitted to use space were evident in other ways aside from just parental permission. Some of the children in the study, for example, did not feel that they had permission to play in the street, and this seemed to relate to it having a more dominant movement function and a feeling that the space was for vehicles not people. The children also mentioned not feeling that they belonged in certain spaces, and feeling threatened if older children or an adult showed up. This suggested that they did not feel that they had full permission to use the space over others older than them, and links to wider social norms around the acceptance of children in public space (Cahill 1990, Collins and Kearns, 2001, Gillespie, 2013; Prout, 2004). 'No ball games' signs were not mentioned by the children as a specific barrier to use spaces but may put out a broader message to others that children should not be playing in them and are not welcome in public space (Gill, 2007).

The children's schools also had an influence on the children's neighbourhood mobility in relation to permissions. Most significantly, the school's policies on independent travel removed permission for children to travel to school without an adult until a specific age. Where this policy was strongly enforced, it had a significant impact on the children's independent travel to school. At one of the schools in the

study, a policy to restrict independent travel to school until year 6 (age 10/11) meant that none of the children in the study travelled to school without an adult. Supportive school policies on walking, conversely, appeared to effectively grant permission for children to travel in this way and helped to create a normative walking culture. This study provides new evidence to demonstrate that school travel policies can have an impact on children's travel behaviours (Crawford et al, 2017; Hinckson and Badland, 2011; Hinckson and Faulkner, 2018), particularly in relation to independent travel, which appears to be an under explored area.

There were also school policies that removed permission for children to behave in certain ways during school time, reflecting understandings that schools act to restrict children's behaviour and opportunities for play (Blatchford and Baines, 2006; Woolley and Griffin, 2015; Thomson, 2005). One school, for example, did not allow children to run in the playground. The impact of this on children's wider neighbourhood experiences is unclear, but a lack of sense of control during school time may well pervade into their wider behaviour outside of school too. The school setting is known to influence children's behavioural strategies (Proshansky and Fabian, 1987). This would link to evidence showing how school policies can influence children's views and behaviours during the school day (Fielding, 2000; Barclay and Tawil, 2013) and warrants further exploration.

Perceptions of permission and whether or not permission was granted also varied at the individual level and in relation to the child's gender. For girls, there was a perception that some spaces, such as ball cages, were not for them and they tended to have lower overall neighbourhood mobility than the boys, though this did vary depending on the child. Girls seemed less likely to be granted permission to use their neighbourhoods due to parental safety concerns. It is suggested that they may also be less likely to request permission due to an awareness of social and cultural norms around how girls should use space (Brown et al, 2008). Many of the girls appeared content with the fact that it was the norm to have more limited neighbourhood mobility than boys, and they would choose not the challenge but accept it and make do as they could with the permissions that they were granted or that they perceived.

Motivation

In order for a child to use their neighbourhood spaces, they also need to be motivated to do so. Motivation can be either intrinsic or extrinsic, but it is the intrinsic motivation that is the focus here, where the motivation is simply taking part in an activity for its own sake or for its inherent interest and enjoyment, rather than for any extrinsic reward (Ryan and Deci, 2020). Although motivation comes from the individual, the context that the individual sits within will influence how they are motivated and what actions they choose to take. There were certain elements in the built environment that the children were more strongly motivated to use and spend time in than others, which were related to opportunities for social interaction, opportunities for play, social influences and social norms, and the natural environment.

The provision of threshold spaces for the children was important in enabling their broader mobility. However, the children needed to be able to see affordances for play within these to be motivated to use them. How these affordances were perceived varied from child to child. In some instances, street space was seen as a place to play and children would find affordances within it. In other cases, a more clearly designated threshold space in the form or grass and a playground was not used by the child, because they perceived it as being for younger children and did not see affordances within it for them.

The potentially playful nature of transitory spaces, though less important than their movement function, also sometimes acted as a motivator. Where there were pedestrian only routes, for example, the children enjoyed using these spaces, which appeared linked to the fact that these could be *secret* routes that others did not know about. The children liked to discover their own spaces that they felt belonged to them and were more motivated to use them when this was the case. They were able to be more playful in these spaces, reflecting the fact that moving in the outdoors is often a sensory experience for children (Mitchell et al, 2007; O'Brien et al, 2000; Mackett and Paskins, 2008; Ross, 2007; Romero, 2015; Moore, 1986).

The potential for social interactions in a space was an important influence in a child's motivations to want to use it. Having other children of a similar age to use a space with, either for play or for travel purposes, acted as a strong motivator. In threshold spaces particularly, children would only use these if they had other children to use them with, reflecting other research showing the importance of social interaction in these spaces (Biddulph, 2010; Bornat, 2016; Marzi, Demetriou and Reimers, 2018; Lambert et al, 2019). In one instance, where the potential for social interactions was online and not outside in the neighbourhood, the child was only motivated to spend time indoors, online interacting. How strongly linked to the community the children were and how many community connections they had also influenced their motivation to use spaces, reflecting other research on this theme (Lee et al, 2015; Veitch et al, 2006; Karsten and van Vliet, 2019; Vlaar et al, 2019). Knowing people in the neighbourhood acted as a motivator for the children to use it more as it led to them feeling more in control. Where there were fewer community links and ties, the children appeared less motivated and confident to spend time in their neighbourhood. Their parents having community ties also appeared to impact on their mobility (Weller and Bruegel, 2009).

Social and cultural influences were also important in influencing the children's motivations. They were strongly motivated to go to local shops and local spaces that had specific affordances that they perceived were for them, whether this be the local park or a nearby friend's home. In contrast, the children were less motivated to use a space when other older children or people they did not know were using it. This reflects knowledge that children are often not made to feel welcome in public space (Prout, 2004), and highlights how not feeling permitted to use a space will impact on motivations. The impact of social norms on children's motivations is also evident in the findings. The context of the study meant that many of the children walked their everyday journeys and car usage was relatively low within their neighbourhoods. The fact that walking was relatively commonplace appeared to influence their motivation to want to do this. Very few children at one of the schools in the study travelled to school without an adult due to policies restricting this. The children appeared

relatively accepting of this and did not demonstrate a motivation to want to do otherwise, suggesting it just became a social norm that they accepted (Tranter, 2006).

Linked to social and cultural influences is perceptions of safety. The children's concerns around safety mostly related to criminal behaviour and other people, rather than the risk of vehicles on the road. However, unlike parental concerns over safety, which then impacted on permission granting and therefore, on the children's mobility, the same did not appear true of the children's concerns. Although many of the children cited certain concerns over safety and fears of crime, there was not a clear connection between these concerns and their mobility. Some of the children had had previous encounters with criminal activity, which they talked about, but it had not stopped them using space. Some of the girls in the study seemed more fearful in certain aspects of their lives, such as spending time at home on their own, but it was still permission granting from their parents that had the impact on their neighbourhood mobility. Children's perceptions of safety are relatively underexplored. In their study from Belgium, Huertas-Delgado et al (2018) similarly found that there was no strong link between adolescents' perceptions of safety and their neighbourhood mobility. Brussoni et al (2020) suggest that children's perceptions of safety did influence neighbourhood mobility, though they note that this might be due to parents perceptions permeating their views, again highlighting the role of the parent in this process.

The external environment and the weather also impacted the children's motivation to use their neighbourhoods. Children in the study were relatively detached from nature, and there were few opportunities to engage deeply in the natural environment within their neighbourhoods. The children listed their favourite places as being a shop, cafe or friend's home, with natural space only getting a mention by one child. This compares to Hart's (1979) findings from the 1970s, where the children produced a long list of natural spaces that they enjoyed to use, such as rivers, lakes, trees, fields, hills and slopes (Chawla, 2015). This lack of connection to nature did not appear to impact on their experiences of place or motivation to use space.

Bornioli, Parkhurst and Morgan (2018) discusses how well-being benefits can also be gained through non-natural elements in the urban environment, which it is suggested is also the case for the children in this study.

There was less motivation from the children to play outside in the winter months, when it is likely to be colder and darker, a pattern that has previously been noted by Valentine (2004). This was the case even with those children who appeared better connected to nature, and it is suggested this is due to the social norm of staying indoors, which also then meant there were less opportunities for social interaction with others. Parents in the study stated that they were less likely to grant permission for their children to be outside in the dark. They also had more safety concerns for children playing, compared to them travelling in their neighbourhoods. This might help to explain why the children's travel patterns were more consistent throughout the year. They did not appear impacted by the weather or seasons in the same way that the children's play was. This is an important finding in an area that is often overlooked in studies on children's use of the outdoors, which tend to overlook any variation or consistency between the seasons (Tucker and Gilliland, 2007; Ergler, Kearns and Witten, 2016).

The Influence of the System

The discussions around space, permission and motivation highlight the importance of understanding children's experiences of place as part of a wider system. It has been shown that how a child experiences their neighbourhood is not just about its physical features, but about how a child interacts with it and those factors that influence these interactions. As Muchow highlighted 90 years ago and as has been the focus of a number of more recent studies (O'Brien et al, 2000; Brussoni et al, 2021; Villanueva et al, 2014; Prout, 2004), at the neighbourhood level it is important to consider the world (or space) that the person experiences and what factors are involved in influencing this experience.

Complexity can raise questions around generalisability. As has been show, each child has a different set of influences that will impact upon how they use their environment. The study has highlighted that there are certain elements of the physical built environment that are important nonetheless. It is important to have these in place to provide the potential affordances for someone to use it. What cannot be assumed however, and what isn't always consistent, is that the person will use it in a certain way. There are various factors that interact with the built environment to influence children's mobility and how they use public space. These combine to create a picture of children and childhood that may be different to what was seen in the past.

Making the Link to Well-Being

At the heart of this study has been the question of how children's experiences of their neighbourhood impact upon on the children themselves. The study did not to set out to quantitatively measure children's well-being, but its consideration of the children's experiences of their neighbourhood have led to some potential links between children's neighbourhood mobility and their well-being being highlighted. This section will describe some of the possible links that have been found and it is suggested that further research could develop this further. This is felt to be important in the context of this study, because it can be easy to become adult centred and to make assumptions on what is 'best' for children, or to romanticise about historic childhood experiences (Karsten, 2005; Holloway and Pimlott-Wilson, 2018; Laureau, 2011; Horton and Kraftl, 2017). A focus on children's well-being helps to ensure that their feelings in the present are considered.

Physical Well-Being

As previous studies have found, the relationship between children's physical well-being and their neighbourhood mobility is complex (Mackett et al, 2004; Stone et al, 2014; Schoeppe et al, 2014; Jago, 2017; Marzi and Reimers, 2018). In terms of the levels of physical activity that the children took part in, walking for travel purposes had an obvious impact on the children's overall levels of physical activity. If the children were going somewhere, then walking rather than travelling in a vehicle always meant that their physical activity levels would increase. However, when it comes to the children's broader mobility and those journeys that were more about play and exploration, findings were more mixed. Some of those children who had less overall neighbourhood mobility were taking part in other activities and clubs that tended to be active, and so their physical activity levels also appeared good, a finding also seen in Jago et al's (2017) study of children's physical activity levels in organised clubs versus playing in the neighbourhood. Conversely, those children with the lowest physical activity levels were those that neither had a lot of neighbourhood mobility nor attended activities or clubs. This meant the importance

for these children of travelling actively in their neighbourhoods was heightened, as it helped to ensure that they at least had some form of physical activity in their daily lives.

The impact of children's neighbourhood mobility and their physical activity levels warrants further investigation, to further unpick the various factors that influence this and the inter-relationships between them.

Mental Well-Being

There are various ways of measuring and viewing mental well-being. A model of psychological well-being called Self-Determination Theory (SDT) and developed by Ryan and Deci (2020) will be use here as a basis for discussions. This can be understood by considering the three basic psychological needs of autonomy, competence and relatedness,. This model has been chosen as it links well to previously discussed influences on children's well-being (Layard and Dunn, 2009), as well as concepts of independence. It also relates to understandings around motivation, with Ryan and Deci arguing that if these three needs are not met, intrinsic motivation will be damaged. This study highlights that there is a possible link between children's psychological well-being and their neighbourhood mobility that warrants further investigation.

Competence

Competence can be defined as developing mastery over tasks that are important and being able to effectively deal with the environment (Ryan and Deci, 2020). The children's neighbourhood mobility helped them to develop competence in getting around their neighbourhoods and navigating the spaces within them. If a child had poor environmental mastery or competence, this led to a lack of motivation and nervousness in developing these skills further and using the spaces in their neighbourhood.

This highlights the importance of seeing children's mobility as a gradual transition through childhood. For the children in the study, spending time in their neighbourhoods with adults when at younger ages, and making many of their trips on foot, had enabled them to gradually build this competence over time, demonstrating the 'inter-dependence' of their mobility (Mikkelsen and Christensen, 2009). They were then more motivated to want to use the spaces further as they grew. The study has shown that it is important not to undervalue these dependent journeys and to recognise the importance of them in supporting children to gain neighbourhood experiences and to help to develop the competence to both support their overall well-being and their future neighbourhood mobility. It also further highlights the importance of having spaces for children that enable these early dependent explorations with an adult to take place.

Environmental competence appeared less linked to children spending time in their neighbourhoods independently and more about simply feeling at ease moving around actively and having positive experiences. One child (Melissa: Wigmore), for example, was granted minimal independent mobility, but still showed competence at getting around her neighbourhood and navigating through it. This was partly because she took part in a range of activities within her neighbourhood, which she would usually travel to on foot. Although she was still developing this skill and had some concerns around her safety, having walked around her neighbourhood frequently with adults had helped her to start to build up this competence. Conversely, another child (Simon, Mansfield) spent minimal time in his neighbourhood aside from the walk to school with his mother. He showed much less competence and had concerns over safety, which appeared to reflect his mother's nervousness. He was poor at navigating around his neighbourhood and was particularly wary and nervous about spending time in it.

The study found that it was children's early active travel behaviours that were the most important for developing competence and environmental mastery and thus supporting the children's well-being. These were also the behaviours that the children were most likely to maintain throughout the year, whereas play in their

neighbourhoods tended to be much reduced in the winter months. With parental safety concerns around children being outdoors in the dark, travelling dependently meant that children could continue their active journeys throughout the year and that these did not curtail in the winter months due to parental fear of a child being out on their own in the dark. For those children who had developed environmental mastery of their neighbourhoods, they were then able to continue to develop this to later spend more time in their neighbourhoods independently, whether for play or travel purposes.

Autonomy

Autonomy can be defined as having a sense of control, initiative and ownership in your actions (Ryan and Deci, 2020). It highlights the importance of focussing not only on the physical independence that a child might have, but also how they feel about their neighbourhood mobility in terms of having autonomy over their actions and having a sense of control over what they do. This distinction is important to highlight as a child being physically independent may not necessarily be positive to their well-being if they do not feel in control of what they are doing or do not have confidence in their actions (Sharpe and Tranter, 2010). It is the experience of freedom that has been shown to be an important dimensions in everyday life and to have a positive influence on children's well-being (Csikszentmihalyi, 2014; Fattore et al, 2016; Abebe, 2020; Devine et al, 2008; Pooley, Turnbull and Adams, 2017).

Those children in the study who used their neighbourhoods independently all showed autonomy in their actions as they were able to make their own decisions and were in full control of their decision making. Most of the children who did not use their neighbourhoods independently still showed some autonomy and control in their actions, through having a good knowledge of their neighbourhood and by being able to confidently use the space and navigate their way around, something they had all learnt by initially travelling or playing dependently with an adult. Travel on foot, even if with an adult, meant that they had some control over the speed and direction of travel, something they would not have gained if travelling in a vehicle. These findings

are similar to Rissotto and Tonucci's (2002) study who explored the concept of autonomy and its impact on children's journeys to school. They found that children had more autonomy when walking alone, but still had more when walking with an adult than travelling in a car. Any prior experiences of dependent play and travel on foot helped to support the children to make the shift to independence. The assumption is often made that if children are not travelling independently then they are travelling in a car, but this does not have to be the case (Sharpe and Tranter, 2010).

For those that children that did not travel or play independently in their neighbourhoods, they were often content with this and did not always feel ready to use their neighbourhoods without an adult, not necessarily seeing the boundaries set as negative Benwell (2013) also notes how children can sometimes see the boundaries set by adults in a positive light. Some of the children talked about having tested out increased independence and not enjoying it, or being nervous about having more. Where the children were discontent with their levels of independent mobility, it was often because not being able to get around independently was restricting what they wanted to do and, therefore, their ability to be autonomous, rather than the fact that they wanted to spend the time without an adult. One child, for example, noted her frustration at not being able to go to the park as her mother was too busy to take her. Not being able to travel independently was therefore restricting her autonomous decision making, and reflected notions of *interdependent* mobility (Nansen et al, 2015; Mikkelsen and Christensen, 2009). Conversely, one child had permission to spend time in her neighbourhood but was also allowed to be autonomous in her decision making when she chose to stay at home instead.

Relatedness

Relatedness can be defined as having a sense of belonging and connectedness with others (Ryan and Deci, 2020). Social relations can develop in a variety of ways and are not solely related to neighbourhood mobility, but can be reinforced through this. Social relations, whether in the form of friends, siblings or community connections,

were found to be important in helping to support the children's neighbourhood mobility and acted as a strong motivator for the children in the study to want to spend time in their neighbourhoods. Other studies have also found that children will feel more secure in a place when they are not alone (Sharpe and Tranter, 2010; Solomon, 1993) and that they will enjoy their experiences more (Fattore et al, 2016; Kirby and Inchley, 2012; Panter et al, 2010). There are a range of studies showing the importance of social capital in supporting children's well-being and neighbourhood mobility (Ferguson, 2006; Drukker et al, 2003; Waterston et al, 2004; Ross, 2007; Lin et al, 2017)

Where the children had friends or siblings to play or travel with, they appeared much more positive about their neighbourhood experiences and more motivated to use their neighbourhoods. Conversely, where these social connections did not exist, the children were more likely to choose to spend time indoors. Feeling a part of a community and having a range of community connections also appeared to act as a motivator, supporting a sense of belonging. This was influenced both by the children's own neighbourhood connections as well as their parents' community connections, as has been found in other studies (Weller and Bruegel, 2009), impacting on both the child's motivation to use their neighbourhood and parental permissions to use it. O'Brien et al (2000) also found that factors such as social relations, a sense of belonging and mutual support all impact on children's mobility and both permissions and motivations. O'Brien et al (2000) found that parents with weaker community connections had more concerns over their child's safety, which is suggested as a reason for some of the findings in this study too.

The theme of relatedness also links to the availability and opportunity to use space. It was easier, for example, for the children to develop positive relations with others if there were spaces available near their home to do so in, or if they had a route to school that they could safely travel together on. For those children that did not have this space available to them, their mobility was more restricted. They therefore did not build up these positive relations in their neighbourhoods and their motivation to

want to spend time there was reduced. There was a normative element to these behaviours, where children were more likely to want to take part if others were too.

Other studies have also highlighted the importance of the social function of journeys, such as the trip to school (Pooley, Turnbull and Adams, 2005). When children travel actively, the social significance of such trips is important. The importance of social connections in children's play links back to historical accounts of street play, which would always take place with other children (Mikkelsen and Christensen, 2009; Karsten, 2005; Opie, & Opie, 1969). In these accounts, a parent, usually the mother, would always be in reach if needed. This again links back to notions of interdependence in children's mobility. A lack of total independence did not appear to deter the children from playing so long as their peers were there.

CHAPTER 10: Conclusions

The study set out to explore how children use their neighbourhoods and what factors are important in influencing their experiences. It has done this by focussing on the built environment and how this interacts with other factors to impact on what children do. The built environment is an important influence on children's neighbourhood mobility, but also needs to be considered in relation to the wider system in which it sits. Children do not only need space in their neighbourhoods, but they also need permission and motivation to use that space. It is only then that a child is able to realise the full potential for neighbourhood mobility that the built environment provides.

Many of the children in the study had reasonable amounts of neighbourhood mobility and relatively high levels of active travel. They demonstrated a good knowledge of their neighbourhoods and were generally good at navigating their local areas. With a wide range of variations and different influences on children's mobility in the study, only a small minority of the children were found to have highly restricted lives. Within this exploration of children's neighbourhood mobility, the study has challenged some existing understandings and new evidence is also provided to help to better understand the influences on children's use of public space.

Children's use of time in their neighbourhoods is a key part of their experience of it. 'Independent mobility' and how much time a child spends in their neighbourhood without an adult is often used as a measure of how successful a place is for children. This study suggests a more nuanced approach to considering children's mobility is more appropriate, whereby how autonomous children feel in their actions is considered. This may or may not be without an adult. It was this autonomy, over and above their independence, that appeared to be the stronger influence on children's experiences in their neighbourhoods. The relevance of considering quality of time over quantity of time is also discussed, with the finding that quality tends to be more important than quantity when it comes to children's use of their neighbourhoods. This questions some existing measures of activity spaces that use distance as the main

measure and indicator. The children in the study benefited from having a range of activities close to home and not having to travel far to access these. Their activity spaces may have been smaller because of this, but this did not appear to have a negative effect on their experiences. This also links to current understandings around 20 minute cities and the benefits of having facilities close to home.

Similarly, when considering the children's travel and how they got around, the children benefitted from having things in close proximity. The children in the study had relatively high levels of active travel and walking specifically. Walkability is often used as a measure for walking levels, with connectivity being one of the main indicators, but these standard measures of walkability do not necessarily reflect what was important to the children in determining their behaviours. Connectivity as a measure of walkability was less important to the children, whereas safety and the potential for social interactions appeared to be more important considerations. This questions whether standard measures of walkability are appropriate to use when considering how children get around.

The concept of 'third places' is used in the study to more fully consider the influence of the built environment on children's mobility, breaking these down into transitory, threshold and destination spaces. Threshold spaces, in particular, are shown to be a relatively poorly understood part of children's neighbourhood mobility in the literature. The study highlights the importance of improving understanding of the relevance of threshold spaces to children's neighbourhood mobility. It demonstrates the importance of these spaces in both enabling children's play close to home, but also in supporting their wider neighbourhood mobility, often acting as a start point for children's explorations of their local area.

Understanding what influences children's mobility is also important in terms of considering what behaviours persist throughout the year. This is an area with limited existing research. The study found that children's active travel behaviours were particularly important in ensuring that their neighbourhood mobility continued throughout the year. This was not the case in relation to the children's outdoor play

in their neighbourhoods though and their use of threshold spaces, which was more likely to decline in the winter months.

Understanding children's neighbourhood experiences from the child's point of view inevitably brings in considerations of well-being. It is suggested that there could be a link between children's neighbourhood mobility and both their physical and mental well-being. In particular, there is a possible link between a child's psychological well-being and their neighbourhood mobility that warrants further investigation, linking to the concepts of competence, autonomy and relatedness. This would help to further develop the in-depth understanding of children's use of their neighbourhoods and their experiences within them that this study has sought to explore.

Implications for Policy and Practice

Although retaining a place-based focus, this study has sought to understand the various factors influencing children's use of their neighbourhoods and how these affect children's behaviour in a space. There are a number of specific contributions that this research can make to the field of urban design and planning and how to create neighbourhoods that enable children's mobility. At present, most planning policies in England are lacking in any consideration of children's needs at all, outside of the provision of schools (Wood et al, 2019). Even the provision of children's playgrounds only tends to be mentioned in planning policy in exceptional circumstances. This needs to change and the study has highlighted some specific areas of relevance.

The importance of threshold spaces for children's play and for enabling wider mobility in their neighbourhoods has been shown and needs to be better embedded into urban planning policies and urban design decision making. This is something that, at present, appears poorly understood within urban planning. The importance of footways and crossing points for children's journeys have also been highlighted, and the relevance of this infrastructure to children needs to be made an integral part of urban planning decision making. This may not seem like much at the local level, but providing it at scale is a much greater challenge. In terms of the destinations that children travel to, the need for these to be in close proximity to home should be reflected in urban planning policies and decision making. This understanding can help to further add to the arguments for 20 minute neighbourhoods.

In addition to the physical design of neighbourhoods, the study has highlighted the need for a shift in the perceptions of use of space and how children are viewed in public space. This is important in influencing children's motivation to use space and the granting of permission to use that space. A cultural shift in understanding is required, so that the general public begin to accept children's presence in these spaces. There also needs to be a shift in perception of at what age it is acceptable for a child to be outside in the public realm without an adult, basing this on

competence and ability rather than age and size. School policies on independent travel have been shown in this study to have a significant influence on how children get around their neighbourhoods, and schools themselves should begin to address these perceptions through their policies and actions, recognising the influence that they can have on wider perceptions of children in the public realm. Other more physical changes can also help to shift perceptions of children in public space. There needs to be stronger guidance on the placement of *no ball games* signs, for example, which signal that children are not wanted in the space. Although these may not put off all children from using the space, they may make it less likely that they will be granted permission to use it. It is suggested that the removal of these would begin to shift how children are perceived in public space.

The London Borough of Hackney, where this research study took place, have been working towards the Borough becoming a child-friendly Borough and putting planning policies in place to support this. They have recently adopted their 'Growing Up In Hackney: Child-Friendly Places Supplementary Planning Document' (Hackney Council, 2021) As much as this move is seen to be a positive shift, this sort of policy approach needs to be embedded at the national level for it to have the impact that is required. This is also the case for the wider shifts in the perception of children in public space that are needed. The requirements of the UN CRC need to be taken seriously in England. Ultimately, children need to be recognised as equal citizens, with their needs considered equally to adults, and systemic change at a number of levels is required in policy and practice in England to make this happen.

Scope for Future Research

There are a number of areas for future research that have been highlighted by the study. The study focussed on three different neighbourhoods in east London. It brought out differences between these, but, due to the small sample, it was not possible to ascertain the impact of individual social class and ethnicity or their interaction with neighbourhood socio-economic characteristics. Further research on this theme could help to better understand the impact of social class and ethnicity on children's neighbourhood mobility and how this impacts at the individual and neighbourhood level.

The study focused on understanding children's well-being and experiences in the present time. Longitudinal work could use this as a start point, but enable a useful exploration of children's relationships with their neighbourhood over time and how these early neighbourhood experiences impact children in later life. This could help to more fully understand the longer term impacts on children's well-being of early neighbourhood mobility. It would also be interesting to explore the longer term impact of school policies on autonomy and control and whether these have ongoing impacts on children's well-being and their neighbourhood mobility.

Safety was an important factor in terms of the children's permission and motivation to use space. It was often challenging to disentangle the relationship between perceptions of safety and actual safety risks, as well as how this related to levels of crime. Further research to begin to better understand this relationship could be beneficial in helping to understand how to support children to feel safe in their neighbourhoods.

The link between children's neighbourhood mobility and their well-being requires further exploration. Understanding the impact of children's neighbourhood mobility on their physical activity levels and the various factors that influence this is still not well understood. This study has also suggested a possible link between children's

neighbourhood mobility and their psychological well-being, which should be further explored.

Finally, future research needs to continue to consider the complexity of children's neighbourhood mobility, considering the influences of the wider system and how different factors interact and influence each other. This study has shown this in the context of inner London. Further studies should continue to develop this understanding, working in different contexts and ensuring that consideration is always made not only regarding the design of a space, but how it is used and the behaviours that it leads to.

Epilogue

"Consciousness is not static." (Hart 1979, 10)

I began researching and writing this thesis four years ago. In my own life, it has made up a small but significant part of it. In my children's lives and those children involved in the study, it is nearly half a lifetime. Although as a researcher I only engaged with the children in the study for a few months during the fieldwork stage, I have been engaging with my own children every day. I have seen them grow up and gradually mature and develop. I want to reflect on this and my own role in the research as a mother, as it has been important in the development of the research study and the analysis and reflections that have come out of it.

It has been challenging having two small but growing children at home whilst trying to complete a PhD. This was particularly so in the later stages of writing up, when the Covid-19 pandemic kicked in and they weren't just at home some of the day, but all of the day. But reflecting on this, it has been a solely time related challenge and perhaps a positive one. Yes, looking after the children took time away from writing. But it also provided me with additional thinking and reflecting time and time just hanging out with children. It was often those moments when I was rushing around trying to make the dinner, whilst keeping half an eye on the boys playing out on the street, that I would have what I call a 'PhD revelation': an idea or concept that would occur to me that I'm sure would not have happened if I'd have been sitting at a screen trying to write. I feel it is important to reflect on these moments, highlighting the reflexivity of the research process and my role within it (Luttrell, 2000).

As my own children have grown, so, of course, have those children who were involved in the study. When writing this, it is two and a half years since I worked with the children on the fieldwork. They will all have started secondary school now, having likely faced their own challenges with transitioning from primary to secondary school in the height of a global pandemic. I have revisited their neighbourhoods since the fieldwork took place, to take photos and for further inspiration. I have

noticed small changes to the urban environment. The pandemic has accelerated changes to the street scene, such as an increased number of modal filters and school streets, and perhaps a few less cars and a few more bikes.

Recently, in my local skate park, when I was making a poor attempt at skateboarding whilst supervising my two sons who are much more skilled at it than me, I noticed Sophia from the study. She was there with a couple of other girls, no adult in sight. I noted that she had been one of the children in the study who had had fairly restricted freedom during the fieldwork, whose parents had not allowed her to go very far alone and who was nervous about gaining increased independence. On this occasion, over two years on, she appeared to have travelled across Hackney to come to this skate park, autonomous and in control of her actions, as well as unsupervised.

I have noted throughout this thesis that children's independence is a journey. This example of Sophia reinforces how her experience when I worked with her was a point in time. It was important to gain that understanding of her experiences at that time, but these were never fixed. She has moved on since then, in a positive way, as she has transitioned to independence and her neighbourhood experiences have broadened and developed.

It is these developing neighbourhood experiences and gradual life transitions that I hope to have captured in this thesis. I hope that it can lead to a better understanding of children's lives and experiences in public space, and of the changes required to benefit them in future.

Appendices

Appendix 1: Go-Along Interviews Session Plan

Items Required

Risk assessment Gopro or video camera, plus dictaphone and individual mics as backup GPS watch charged

Notepad and pen

Camera

Teaching assistant to support?

Aims

To explore where children and go and what they do in their local neighbourhood Inspired by Hart's approach

Explore their feelings of well-being and autonomy

Activities

Introduction

Reminder of the project and what we talked about last week

Tell them that I want them to take me on a tour of their neighbourhood. Mainly want to look at the places that they go already and discuss where they go, what they do, and who with

Go through consents and risks.

Factors to understand

- What do they think of their neighbourhood? Who do they know? What community things are they involved in?
- Where children go in their neighbourhood?
- obvious places
- outdoors/indoors
- 'secret' places
- How do they move around their neighbourhood?
- Who do they go with? Do they feel autonomous/independent?
- Do you choose to come here? Do they have a free choice? Who chooses? Whose decision?
- · Do you feel safe?

- · What if the weather was different?
- What about the darkness at this time of year?
- What would your parents think?
- What would your school think?

Output and Outcomes

To better understand how children use their neighbourhoods

Appendix 2: Travel Diary Template

MONDAY

Write about all the times during the day when you were outside or going somewhere

What I was doing	Who I went with	Where I was going	How I got around	How I felt



On the map, maark where you went or the routes you took. Use the different colours below to show how you got around

Car

On foot

Bik

Appendix 3: Whole Class Questionnaire



Please remember that this is NOT a test. There are no right or wrong answers and you do not have to answer all of the questions if you don't want to.

Play

1.Tick all the places that you usually play in. Home Back garden Front garden Street Local park Friend's house Other (write in)	2. Tick all the places that you would LIKE to play in. Home Back garden Front garden Street Local park Friend's house Other (write in)	
3. How do you usually get to where you play? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)	4. How would you LIKE to get to where you play? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)	
5. Who were you with when you were playing yesterday? On my own Parent Other adult Older child/teenager Child of same age or younger	6. Who would you LIKE to be with when you were playing yesterday? On my own Parent Other adult Older child/teenager Child of same age or younger	
7.Are you allowed to play outside on your own? Yes No		
8.How often do you play outside in you school)? Every day Once a week or more Once a month or more Hardly ever Never	ır neighbourhood? (not including at	

Travel

9. How did you get to school today? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)	10. How would you LIKE get to school? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)
11. Who did you travel to school with today? On my own Parent Other adult Older child/teenager Child of same age or younger	12. Who would you LIKE to travel to school with? On my own Parent Other adult Older child/teenager Child of same age or younger
13. How will you get home today? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)	14. How would you LIKE to get home? Walk/ scoot/ skate Cycle Local bus, train or underground Car Other (write in)
15. Who will you travel home with today? On my own Parent Other adult Older child/teenager Child of same age or younger	16. Who would you LIKE to travel home with? On my own Parent Other adult Older child/teenager Child of same age or younger
17.Are you allowed to cross main roads on your own? Yes No	18. Are you allowed to ride your bike to go to places (like the park) on your own? Yes No Don't have a bike

19.Are you allowed to travel to/from school on your own? Yes No	20.Are you allowed to go outside on your own in the dark? Yes No
21.Are you worried about anything whe friends? Traffic Getting lost Bullying Strangers Other (write in)	en you are outside on your own or with
22. How safe do you feel in your neighbourhood? Very safe Fairly safe Not very safe Not safe at all	23. Do you feel safer if you're with an adult? Yes No
24. Do you prefer to spend time indoors Outdoors Outdoors	s or outdoors?
You	
24. How old are you? years old	25. Are you a:

Appendix 4: Parent Questionnaire

Start of Block: Introduction

1.1 Thank you for agreeing to take part in this survey, which is an important part of the research on child-friendly neighbourhoods that your year 5 child has been involved in at school. The child-friendly neighbourhoods project is funded by the University of Westminster and will explore how children use their neighbourhoods for play and getting around. The project will be led by Holly Weir, a researcher from the University of Westminster. The Mayor of Hackney's ambition is to make Hackney a child-friendly Borough by 2026. This project should support this ambition and follows on from a pilot study with another school in Hackney earlier this year. This survey forms part of the data collection for the project. This survey should only take around 10 minutes to complete. Data received will be kept anonymised and any names within the project will be changed. Data will be retained and stored securely for a limited period of time to allow analysis of it related to this project only. If you have any questions before or during the study, please contact Holly Weir at holly weir@my.westminster.ac.uk or my supervisor Rachel Aldred at R.Aldred@westminster.ac.uk. Please remember to answer questions in relation to your year 5 child only as you progress through the survey.
1.2 Please enter your survey ID number
End of Block: Introduction
Start of Block: Travel
Q40 TRAVEL

2.1 How does your child usually travel to school at this time of year?		
Walk/scoot/skate (1)		
O Cycle (2)		
O Local bus, train or underground (3)		
O Car (4)		
Other - please specify (5)		
2.2 How does your child usually travel home from school at this time of year?		
○ Walk/scoot/skate (1)		
O Cycle (2)		
O Local bus, train or underground (3)		
O Car (4)		
Other - please specify (5)		
2.3 Who does your child usually travel to school with at this time of year?		
On their own (1)		
O Parent (2)		
O Another adult (3)		
Older child/teenager (4)		
Child of same age or younger (5)		

2.4 Who does your child usually travel home from school with at this time of year?		
On their own (1)		
O Parent (2)		
O Another adult (3)		
Older child/teenager (4)		
Child of same age or younger (5)		
2.5 Is your child allowed to cross main roads alone?		
○ Yes (1)		
O No (2)		

2.6	Do any of	the following stop you from letting your child travel unsupervised?	
		Prefer to spend time with them (1)	
		Take them on my way to work (2)	
		School doesn't allow it (3)	
		Too far to school (4)	
		Traffic danger (5)	
		Fear of assault (6)	
		Fear of bullying (7)	
		Might get lost (8)	
		Child is unreliable or too young (9)	
		Other - please specify (10)	
2.7	Do you thi	ink your child is happy with how they travel?	
	O Extrem	nely happy (1)	
	O Somewhat happy (2)		
	O Neither happy nor unhappy (3)		
	O Somewhat unhappy (4)		
	O Extrem	nely unhappy (5)	

2.8 Which type of transport do you think your child's school prefers children to use?
○ Walk/scoot/skate (1)
Cycle (2)
O Local bus, train or underground (3)
O Car (4)
Other - please specify (5)
2.9 Is your child's school happy for children to travel to/from school unsupervised?
○ Yes (1)
O No (2)
Other (3)
Display This Question:
If How does your child usually travel to school at this time of year? = Cycle Or How does your child usually travel home from school at this time of year? = Cycle
Q52 What type of route does your child usually cycle on to travel to/from school?
O Road (1)
O Pavement (2)
Segregated cycle path/footpath (3)
End of Block: Travel
Start of Block: Play
Q42 PLAY

3.1 Where does your child play in their neighbourhood?		
	Home (1)	
	Back garden (2)	
	Front garden (3)	
	Street (4)	
	Local park (5)	
	Friend's house (6)	
	Other - please specify (7)	
		

3.2 Which places is your child allowed to play in without an adult?			
		Home (1)	
		Back garden (2)	
		Front garden (3)	
		Street (4)	
		Local park (5)	
		Friend's house (6)	
		Other - please specify (7)	
3.3	What is yo	our child's favourite place to play?	
	O Home (4)		
	O Back garden (6)		
	Front garden (7)		
	Street	(8)	
	O Local park (9)		
	O Friend's house (10)		
	Other -	please specify (11)	

3.4 How does your child get to the places where they play?			
	Walk/scoot/skate (1)		
	Cycle (2)		
	Local bus, train or underground (3)		
	Car (4)		
	Other - please specify (5)		
3.5 How	often does your child play outside?		
	O Daily (1)		
	O Weekly (2)		
	O Monthly (3)		
	O Less frequently (4)		
	Never (5)		
3.6 Is your child allowed to go and call on friends nearby without an adult?			
O ,	res (1)		
	No (2)		
0	Other - please specify (3)		

3.7 Do any of tunsupervised?	the following stop you from letting your child play in the neighbourhood	
	Prefer to spend time with them (1)	
	Too far to where they play (2)	
	Traffic danger (3)	
	Fear of assault (4)	
	Fear of bullying (5)	
	Might get lost (6)	
	Child is unreliable or too young (7)	
	Other - please specify (8)	
3.8 Do you thi	nk your child is happy with their play opportunities?	
O Extreme	ely happy (1)	
Somewhat happy (2)		
O Neither happy nor unhappy (3)		
O Somewhat unhappy (4)		
○ Extreme	ely unhappy (5)	
Display This Ques	tion:	
	your child get to the places where they play? = Cycle	

Q53 What type of route does your child usually cycle on to get to where they play?
O Road (1)
O Pavement (2)
Segregated cycle path/footpath (3)
End of Block: Play
Start of Block: Natural Environment
Q44 NATURAL ENVIRONMENT
4.1 Which statement best describes your child?
My child is an outdoors child (1)
My child is an indoors child (2)
4.2 Do YOU enjoy spending time in green spaces, such as parks?
O Definitely yes (6)
O Probably yes (7)
O Might or might not (8)
O Probably not (9)
O Definitely not (10)

4.3 How often do you go to green spaces in your neighbourhood?
O Daily (1)
O Weekly (2)
O Monthly (3)
C Less frequently (8)
O Never (9)
4.4 What is the closest green space to your house?
4.5 Is your child usually allowed to go out alone after dark?
O Yes (1)
O No (2)
End of Block: Natural Environment
Start of Block: Your Neighbourhood
Q47 YOUR NEIGHBOURHOOD

5.1 How many people do you recognise to say 'hello' to within 5 minutes walk of your house?
O None (1)
O 1-5 (2)
O 5-10 (3)
O 10-20 (4)
O 20+ (5)
5.2 How many people do you recognise to say 'hello' to in your neighbourhood?
O None (1)
O 1-5 (2)
O 5-10 (3)
O 10-20 (4)
O 20+ (5)
5.3 How long have you lived in your current home?
5.4 How long have you lived in your current neighbourhood?

5.5 Are you happy with your neighbourhood?
Extremely happy (1)
O Somewhat happy (2)
O Neither happy nor unhappy (3)
O Somewhat unhappy (4)
Extremely unhappy (5)
5.6 Do you feel safe in your neighbourhood?
○ Yes (1)
O No (2)
O Sometimes (3)
End of Block: Your Neighbourhood
Start of Block: You and Your Household
Q49 YOU AND YOUR HOUSEHOLD
6.1 Do you own a bike?
○ Yes (1)
O No (2)

6.2 Does your child own a bike?
○ Yes (1)
O No (2)
6.3 Does your household own a car?
○ Yes (1)
O No (2)
6.4 Is your child entitled to free school meals?
O Yes (1)
O No (2)
6.5 What are the ages of the other children in your household?
6.6 Are you the child's parent?
O Yes (4)
No - please specify your relationship (7)

6.7 Are you	
O Male (1)	
O Female (2)	
O Prefer not to say (3)	
End of Block: You and Your Household	
Start of Block: General	
Q51 GENERAL	
7.1 If you or your child would like to be involved in future similar projects, playour email address below	ease provide
7.2 Please write any additional comments below	
End of Block: General	

Appendix 5: Summer Term Children's Questionnaire

Where I go

List your top five places to go in your local area
1.
2.
3.
4.
5.
On the next page, draw a picture of how you think your top place would look in each of the four seasons and describe what you would do there.

Summer	Winter
Spring	Autumn

Home & Family

Mother Father
2. What type of job does your mother have?
3. What type of job does your father have?
4. Does your family own or rent their home? Social rent Private rent Owned/mortgage Don't know
5. Do you have your own bedroom? Yes No
If not, who do you share with?
6. Over the past year, how many times did you travel on holiday with your family?
7. How well off do you think your family is? Not at all Not particularly Fairly Rather Very

Freedom to choose

8. Think about how much time you spend with your parent/s. Is this Not enough Just right Too much
9. Think about how often your parents and teachers let you choose what you do each day.
10. How often are you allowed by your parents to do what you want to do? All of the time Most of the time Some of the time Never
11. How often are you allowed by your teachers to do what you want to do? All of the time Most of the time Some of the time Never
12. Are you happy with the amount of choice you get about what you do each day at school? Yes No
13. Are you happy with the amount of choice you get about what you do each day <u>outside of school</u> ? Yes No
14. Do you feel like you're in control of what you do each day? Yes No
15. If there was one thing you could change about what you're allowed to do or where you're allowed to go, what would it be?

References

Abebe, Tatek. 2019. 'Reconceptualising Children's Agency as Continuum and Interdependence'. *Social Sciences* 8 (3): 81. https://doi.org/10.3390/socsci8030081.

Abela, Andrew V. 2006. 'Marketing and Consumerism: A Response to O'Shaughnessy and O'Shaughnessy'. *European Journal of Marketing* 40 (1/2): 5–16. https://doi.org/10.1108/03090560610637284.

Agar, M. P. Alderson, K. Backett, H. Becker, H.S. Becker, B. Greer, E.C. Hughes, A. Strauss, J. Brannen, M. O'Brien, D. Buckingham, R. Burgess, W. Corsaro, L. Molinari, T. Cottle, S. Delamont, N.K. Denzin, M. Edwards, R. Emond, J. Ennew, N. Fielding, N. Fielding, G.A. Fine, K.L. Sandstrom, E. Goffman, A. Gouldner, T. Grisso, M. Hammersley, P. Atkison, M.H. Hessler, V. Hey, S. Jackson, S. Scott, A. James, C. Jenks, A. Prout, G. Lee-Treweek, D. Leonard, J. Lofland, L.H. Lofland, N. Mandell, T. May, B. Mayall, G. McCall, J. Simmons, H. Polsky, S. Punch, J. Qvortrup, C. Schatzman, A.L. Strauss, D.E. Smith, A. Solberg, L. Stanley, S. Wise, B. Thorne, S. Thornton, W.F. Whyte, H. Williamson, I. Butler & P. Willis, Sheila. 2005. 'Ethnographic Research Methods with Children and Young People'. In *Researching Children's Experience*, 124–39. SAGE Publications Ltd. https://doi.org/10.4135/9781849209823.n7.

Aggio, Daniel, Benjamin Gardner, Justin Roberts, James Johnstone, Brendon Stubbs, Genevieve Williams, Guillermo Felipe López Sánchez, and Lee Smith. 2017. 'Correlates of Children's Independent Outdoor Play: Cross-Sectional Analyses from the Millennium Cohort Study'. *Preventive Medicine Reports* 8 (December): 10–14. https://doi.org/10.1016/j.pmedr.2017.07.007.

Ahmadi, Ehsan, and Gen Taniguchi. 2007. 'Influential Factors on Children's Spatial Knowledge and Mobility in Home–School Travel: A Case Study in the City of Tehran'. *Journal of Asian Architecture and Building Engineering* 6 (2): 275–82. https://doi.org/10.3130/jaabe.6.275.

Alanen, Leena, and Berry Mayall. 2001. *Conceptualizing Child-Adult Relations*. Psychology Press.

Aliyas, Zeinab. 2021. 'The Role of Subjective and Objective Indicators of Neighbourhood Safety on Children's Physical Activity Level'. *Security Journal*, January. https://doi.org/10.1057/s41284-020-00278-8.

Alldred, Pam, Miriam David, and Rosalind Edwards. 2002. 'Minding the Gap: Children and Young People Negotiating Relations between Home and School'. In *Children, Home and School: Regulation, Autonomy or Connection*.

Alparone, Francesca Romana, and Maria Giuseppina Pacilli. 2012. 'On Children's Independent Mobility: The Interplay of Demographic, Environmental, and Psychosocial Factors'. *Children's Geographies* 10 (1): 109–22. https://doi.org/10.1080/14733285.2011.638173.

Anderson, Benedict. 1991. *Imagined Communities: Reflections on the Origin and Spread of Nationalism*. Verso.

Appleton, Josie. 2015. 'No Place for the Young: The Towns Where Childhood Is Being Criminalised'. *Open Democracy UK*, 2015.

https://www.opendemocracy.net/ourkingdom/josie-appleton/no-place-for-young-towns-where-childhood-is-being-criminalised.

Appleyard, Donald, M. Sue Gerson, and Mark Lintell. 1981. *Livable Streets*. University of California Press.

Ayllón, Ester, Nieves Moyano, Azucena Lozano, and María-Jesús Cava. 2019. 'Parents' Willingness and Perception of Children's Autonomy as Predictors of Greater Independent Mobility to School'. *International Journal of Environmental Research and Public Health* 16 (5): 732. https://doi.org/10.3390/ijerph16050732. Babb, Courtney, Doina Olaru, Carey Curtis, and Dave Robertson. 2017. 'Children's Active Travel, Local Activity Spaces and Wellbeing: A Case Study in Perth, WA'. *Travel Behaviour and Society* 9 (October): 81–94. https://doi.org/10.1016/j.tbs.2017.06.002.

Badland, Hannah. 2012. 'Child Independent Mobility: Making the Case, and Understanding How the Physical and Social Environments Impact on the Behaviour (Pp. 51-79)'. In *Urbanization and the Global Environment*. https://www.novapublishers.com/catalog/product_info.php?products_id=35005.

Badland, Hannah, Robin Kearns, Penelope Carroll, Melody Oliver, Suzanne Mavoa, Phil Donovan, Karl Parker, Moushumi Chaudhury, En-Yi Lin, and Karen Witten. 2016. 'Development of a Systems Model to Visualise the Complexity of Children's Independent Mobility'. *Children's Geographies* 14 (1): 91–100. https://doi.org/10.1080/14733285.2015.1021240.

Baranowski, Tom, William O. Thompson, Robert H. Durant, Janice Baranowski, and Jackie Puhl. 1993. 'Observations on Physical Activity in Physical Locations: Ager Gender, Ethnicity, and Month Effects'. *Research Quarterly for Exercise and Sport* 64 (2): 127–33. https://doi.org/10.1080/02701367.1993.10608789.

Barclay, Mike, and Ben Tawil. 2013. 'Wrexham Play Sufficiency Assessment 2013 (Abridged)'. Wrexham County Borough Council.

Barton, Cassie. 2017. 'Home Ownership and Renting: Demographics', September. http://researchbriefings.parliament.uk/ResearchBriefing/Summary/CBP-7706.

Bell, Alice. 2007. 'Designing and Testing Questionnaires for Children'. *Journal of Research in Nursing* 12 (5): 461–69. https://doi.org/10.1177/1744987107079616.

Ben-Arieh, Asher, and Ivar Frønes. 2011. 'Taxonomy for Child Well-Being Indicators: A Framework for the Analysis of the Well-Being of Children'. *Childhood* 18 (4): 460–76. https://doi.org/10.1177/0907568211398159.

Bentley, Holly, Orla O'Hagan, Alison Brown, Nikki Vasco, Charlotte Lynch, Jessica Peppiate, Mieka Webber, et al. 2017. 'How Safe Are Our Children: The Most Comprenhensive Overview of Child Protection in the UK. NSPCC. https://www.nspcc.org.uk/globalassets/documents/research-reports/how-safe-children-2017-report.pdf.

Benwell, Matthew C. 2013. 'Rethinking Conceptualisations of Adult-Imposed Restriction and Children's Experiences of Autonomy in Outdoor Space'. *Children's Geographies* 11 (1): 28–43. https://doi.org/10.1080/14733285.2013.743279.

Best, Joel. 1998. 'Too Much Fun: Toys as Social Problems and the Interpretation of Culture'. *Symbolic Interaction* 21 (2): 197–212. https://doi.org/10.1525/si.1998.21.2.197.

Beunderman, J. 2010. *People Make Play: The Impact of Staffed Play Provision on Children, Families and Communities.* NCB for Play England.

Beuret, Kristine. 2016. *Children and Travel: ITC Occasional Paper No. 9.* Independent Transport Commission. http://www.theitc.org.uk/wp-content/uploads/2016/04/ITC-Occasional-Paper-9-Children-and-Travel-April-2016.pdf.

Bhosale, Julie. 2015. 'Understanding Children's Independent Mobility'. PhD thesis, Auckland University of Technology. https://core.ac.uk/reader/56365680.

Bhosale, Julie, Scott Duncan, and Grant Schofield. 2017. 'Intergenerational Change in Children's Independent Mobility and Active Transport in New Zealand Children

and Parents'. *Journal of Transport & Health*, October. https://doi.org/10.1016/j.jth.2017.09.004.

Bianchi, Suzanne M. 2000. 'Maternal Employment and Time with Children: Dramatic Change or Surprising Continuity?' *Demography (Pre-2011); Silver Spring* 37 (4): 401–14.

Biddulph, Mike. 2010. 'Evaluating the English Home Zone Initiatives'. *Journal of the American Planning Association* 76 (2): 199–218. https://doi.org/10.1080/01944361003622688.

Bishop, Kate, and Linda Corkery. 2017. *Designing Cities with Children and Young People: Beyond Playgrounds and Skate Parks*. Routledge.

Blatchford, Peter, and Ed Baines. 2006. *A Follow up National Survey of Breaktimes in Primary and Secondary Schools.* The Nuffield Foundation.

https://www.nuffieldfoundation.org/project/a-follow-up-survey-of-break-and-lunch-times-in-schools.

Blinkert, Baldo, and Ellen Weaver. 2015. 'Residential Environment and Types of Childhood'. *Humanities and Social Sciences* 3 (5): 159. https://doi.org/10.11648/j.hss.20150305.11.

Boarnet, Marlon G., Craig L. Anderson, Kristen Day, Tracy McMillan, and Mariela Alfonzo. 2005. '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 (2): 134–40. https://doi.org/10.1016/j.amepre.2004.10.026.

Bornat, Dinah. 2016. *Housing Design for Community Life: Researching How Residents Use External Spaces in New Developments.* ZCD Architects. https://www.zcdarchitects.co.uk/housing-design-for-community-life.

Bornioli, Anna, Graham Parkhurst, and Phillip L. Morgan. 2018. 'Psychological Wellbeing Benefits of Simulated Exposure to Five Urban Settings: An Experimental Study From the Pedestrian's Perspective'. *Journal of Transport & Health* 9 (June): 105–16. https://doi.org/10.1016/j.jth.2018.02.003.

Bourke, Jackie. 2012. Standing in the Footprints of the Contemporary Urban Child: Constructing a Sense of Place Along The Everyday Urban Routes Children Walk Through Public Space. PhD thesis, Technological University Dublin. https://doi.org/10.21427/D7NS35.

Bovill, Moira, and Sonia Livingstone. 2001. 'Bedroom Culture and the Privatization of Media Use'. In *Children and Their Changing Media Environment: A European Comparative Study*, edited by Sonia Livingstone and Moira Bovill, 179–200. Lawrence Erlbaum Associates.

Bradshaw, J (ed). 2005. *The Wellbeing of Children in the UK (Second Edition)*. London: Save the Children.

Braza, Mark, Wendy Shoemaker, and Anne Seeley. 2004. 'Neighborhood Design and Rates of Walking and Biking to Elementary School in 34 California Communities'. *American Journal of Health Promotion* 19 (2): 128–36. https://doi.org/10.4278/0890-1171-19.2.128.

Broberg, Anna, Samuli Salminen, and Marketta Kyttä. 2013. 'Physical Environmental Characteristics Promoting Independent and Active Transport to Children's Meaningful Places'. *Applied Geography* 38 (Supplement C): 43–52. https://doi.org/10.1016/j.apgeog.2012.11.014.

Brodersen, Naomi Henning, Andrew Steptoe, Sara Williamson, and Jane Wardle. 2005. 'Sociodemographic, Developmental, Environmental, and Psychological Correlates of Physical Activity and Sedentary Behavior at Age 11 to 12'. *Annals of*

Behavioral Medicine: A Publication of the Society of Behavioral Medicine 29 (1): 2–11. https://doi.org/10.1207/s15324796abm2901_2.

Brömmelstroet, Marco te, Anna Nikolaeva, Meredith Glaser, Morten Skou Nicolaisen, and Carmen Chan. 2017. 'Travelling Together Alone and Alone Together: Mobility and Potential Exposure to Diversity'. *Applied Mobilities* 2 (1): 1–15. https://doi.org/10.1080/23800127.2017.1283122.

Bronfenbrenner, Urie. 1974. 'Developmental Research, Public Policy, and the Ecology of Childhood'. *Child Development* 45 (1): 1–5. https://doi.org/10.2307/1127743.

Bronfenbrenner, Urie. 1977. 'Toward an Experimental Ecology of Human Development'. *American Psychologist* 32 (7): 513–31. https://doi.org/10.1037/0003-066X.32.7.513.

Bronfenbrenner, Urie. 1999. 'Environments in Developmental Perspective: Theoretical and Operational Models'. In *Measuring Environment across the Life Span: Emerging Methods and Concepts*, 3–28. Washington, DC, US: American Psychological Association. https://doi.org/10.1037/10317-001.

Brown, Belinda, Roger Mackett, Yi Gong, Kay Kitazawa, and James Paskins. 2008. 'Gender Differences in Children's Pathways to Independent Mobility'. *Children's Geographies* 6 (4): 385–401. https://doi.org/10.1080/14733280802338080.

Brussoni, Mariana, Rebecca Gibbons, Casey Gray, Takuro Ishikawa, Ellen Beate Hansen Sandseter, Adam Bienenstock, Guylaine Chabot, et al. 2015. 'What Is the Relationship between Risky Outdoor Play and Health in Children? A Systematic Review'. *International Journal of Environmental Research and Public Health* 12 (6): 6423–54. https://doi.org/10.3390/ijerph120606423.

Brussoni, Mariana, Yingyi Lin, Christina Han, Ian Janssen, Nadine Schuurman, Randy Boyes, David Swanlund, and Louise C. Mâsse. 2020. 'A Qualitative Investigation of Unsupervised Outdoor Activities for 10- to 13-Year-Old Children: "I like Adventuring but I Don't like Adventuring without Being Careful". *Journal of Environmental Psychology* 70 (August): 101460. https://doi.org/10.1016/j.jenvp.2020.101460.

Burdette, Hillary L., and Robert C. Whitaker. 2005. 'A National Study of Neighborhood Safety, Outdoor Play, Television Viewing, and Obesity in Preschool Children'. *Pediatrics* 116 (3): 657–62. https://doi.org/10.1542/peds.2004-2443.

Burke, C. 2005. 'Play in Focus': Children Researching Their Own Spaces and Places for Play. *Children, Youth and Environments* 15(1): 27-53

Burkhauser, Richard V., and John Cawley. 2008. 'Beyond BMI: The Value of More Accurate Measures of Fatness and Obesity in Social Science Research'. *Journal of Health Economics* 27 (2): 519–29. https://doi.org/10.1016/j.jhealeco.2007.05.005.

Buss, Shirl. 1995. 'Urban Los Angeles from Young People's Angle of Vision'. *Children's Environments* 12 (3): 340–51.

Cahill, Spencer E. 1990. 'Childhood and Public Life: Reaffirming Biographical Divisions'. *Social Problems* 37 (3): 390–402. https://doi.org/10.2307/800750.

Carpiano, Richard M. 2009. 'Come Take a Walk with Me: The "Go-Along" Interview as a Novel Method for Studying the Implications of Place for Health and Well-Being'. *Health & Place* 15 (1): 263–72. https://doi.org/10.1016/j.healthplace.2008.05.003.

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*, June. http://www.tandfonline.com/doi/abs/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 (2): 217–27. https://doi.org/10.1016/j.healthplace.2007.06.004.

Catalano, Richard F., M. Lisa Berglund, Jeanne A. M. Ryan, Heather S. Lonczak, and J. David Hawkins. 2002. 'Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs'. *Prevention & Treatment* 5 (1): No Pagination Specified-No Pagination Specified. https://doi.org/10.1037/1522-3736.5.1.515a.

Catling, Simon. 2005. 'Children's Personal Geographies and the English Primary School Geography Curriculum'. *Children's Geographies* 3 (3): 325–44. https://doi.org/10.1080/14733280500353019.

Cele, Sofia, and Danielle van der Burgt. 2015. 'Participation, Consultation, Confusion: Professionals' Understandings of Children's Participation in Physical Planning'. *Children's Geographies* 13 (1): 14–29. https://doi.org/10.1080/14733285.2013.827873.

Chambers, T., A. L. Pearson, I. Kawachi, Z. Rzotkiewicz, J. Stanley, M. Smith, M. barr, C. Ni Mhurchu, and L. Signal. 2017. 'Kids in Space: Measuring Children's Residential Neighborhoods and Other Destinations Using Activity Space GPS and Wearable Camera Data'. *Social Science & Medicine* 193 (Supplement C): 41–50. https://doi.org/10.1016/j.socscimed.2017.09.046.

Chawla, Louise. 1986. 'The Ecology of Environmental Memory. *Children's Environments Quarterly* 3 (4): 34–42.

Chawla, Louise. 2015. 'Benefits of Nature Contact for Children'. *Journal of Planning Literature* 30 (4): 433–52. https://doi.org/10.1177/0885412215595441.

Chawla, Louise (ed). 2002. Growing up in an Urbanising World. Earthscan.

Christensen, Pia, Sophie Hadfield-Hill, John Horton, and Peter Kraftl. 2017. *Children Living in Sustainable Built Environments: New Urbanisms, New Citizens*. Routledge.

Christensen, Pia, and Allison James. 2017. *Research with Children: Perspectives and Practices*. Taylor & Francis.

Christensen, Pia, Miguel Romero Mikkelsen, Thomas Alexander Sick Nielsen, and Henrik Harder. 2011. 'Children, Mobility, and Space: Using GPS and Mobile Phone Technologies in Ethnographic Research'. *Journal of Mixed Methods Research* 5 (3): 227–46. https://doi.org/10.1177/1558689811406121.

Christensen, Pia, and Margaret O'Brien. 2003. *Children in the City: Home Neighbourhood and Community*. Routledge.

Christian, Hayley E., Karen Villanueva, Charlotte D. Klinker, Matthew W. Knuiman, Mark Divitini, and Billie Giles-Corti. 2016. 'The Effect of Siblings and Family Dog Ownership on Children's Independent Mobility to Neighbourhood Destinations'. *Australian and New Zealand Journal of Public Health* 40 (4): 316–18. https://doi.org/10.1111/1753-6405.12528.

Coleman, James S. 1988. 'Social Capital in the Creation of Human Capital'. *American Journal of Sociology* 94: S95–120.

Collins, Damian CA, and Robin A. Kearns. 2001. 'The Safe Journeys of an Enterprising School: Negotiating Landscapes of Opportunity and Risk'. *Health & Place* 7 (4): 293–306.

Collins, Damian, and Tara Coleman. 2008. 'Social Geographies of Education: Looking within, and beyond, School Boundaries'. *Geography Compass* 2 (1): 281–99.

De Coninck-Smith, Ning, and Marta Gutman. 2004. 'Children and Youth in Public: Making Places, Learning Lessons, Claiming Territories'. *Childhood* 11 (2): 131–41. https://doi.org/10.1177/0907568204043048.

Cook, Simon, Jon Shaw, and Paul Simpson. 2016. 'Jography: Exploring Meanings, Experiences and Spatialities of Recreational Road-Running'. *Mobilities* 11 (5): 744–69. https://doi.org/10.1080/17450101.2015.1034455.

Coombes, Emma, Esther van Sluijs, and Andy Jones. 2013. 'Is Environmental Setting Associated with the Intensity and Duration of Children's Physical Activity? Findings from the SPEEDY GPS Study'. *Health & Place* 20 (March): 62–65. https://doi.org/10.1016/j.healthplace.2012.11.008.

Cooper Marcus, Clare, and Wendy Sarkissian. 1988. *Housing As If People Mattered:*Site Design Guidelines for the Planning of Medium-Density Family Housing.
University of California Press.

Cowman, Krista. 2017. 'Play Streets: Women, Children and the Problem of Urban Traffic, 1930–1970'. *Social History* 42 (2): 233–56. https://doi.org/10.1080/03071022.2017.1290366.

Crawford, S. B., S. K. Bennetts, N. J. Hackworth, J. Green, H. Graesser, A. R. Cooklin, J. Matthews, et al. 2017. 'Worries, "Weirdos", Neighborhoods and Knowing People: A Qualitative Study with Children and Parents Regarding Children's Independent Mobility'. *Health & Place* 45 (May): 131–39. https://doi.org/10.1016/j.healthplace.2017.03.005.

Creighton, Susan, and Gerry Tissier. 2003. *Child Killings in England and Wales*. NSPCC. http://www.familieslink.co.uk/download/june07/Child%20killings.pdf.

Cresswell, Tim. 2006. *On the Move: Mobility in the Modern Western World*. Taylor & Francis.

Csikszentmihalyi, Mihaly. 2014. Flow and the Foundations of Positive Psychology: The Collected Works of Mihaly Csikszentmihalyi. Springer.

Darker, Catherine D., Michael Larkin, and David P. French. 2007. 'An Exploration of Walking Behaviour—An Interpretative Phenomenological Approach'. *Social Science & Medicine* 65 (10): 2172–83. https://doi.org/10.1016/j.socscimed.2007.06.029.

Davie, Ronald, Charlotte Panting, and Tony Charlton. 2004. 'Mobile Phone Ownership and Usage Among Pre-Adolescents'. *Telemat. Inf.* 21 (4): 359–73. https://doi.org/10.1016/j.tele.2004.04.001.

Davison, Kirsten Krahnstoever, and Catherine T Lawson. 2006. 'Do Attributes in the Physical Environment Influence Children's Physical Activity? A Review of the Literature'. *The International Journal of Behavioral Nutrition and Physical Activity* 3 (July): 19. https://doi.org/10.1186/1479-5868-3-19.

Department for Transport. 2014. *National Travel Survey 2014: Travel to School*. UK Government.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/476635/travel-to-school.pdf.

Department for Transport. 2017a. *Travel by Age and Gender (NTS06): National Travel Survey*. UK Government. https://www.gov.uk/government/statistical-data-sets/nts06-age-gender-and-modal-breakdown.

Department for Transport. 2017b. *Travel by Car Availability, Income, Ethnic Group, Household Type and NS-SEC (NTS07)*. 2017. UK Government. https://www.gov.uk/government/statistical-data-sets/nts07-car-ownership-and-access.

Department for Transport. 2018. Walking and Cycling Statistics, England: 2016. UK Government.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attach ment_data/file/674503/walking-and-cycling-statistics-england-2016.pdf.

Department for Transport. 2019. National Travel Survey 2018: NTS0614. UK Government. https://www.gov.uk/government/statistical-data-sets/nts03-modal-comparisons.

Derr, Victoria. 2002. 'Children's Sense of Place in Northern New Mexico'. *Journal of Environmental Psychology* 22 (1): 125–37. https://doi.org/10.1006/jevp.2002.0252.

Devine, Joe, Laura Camfield, and Ian Gough. 2008. 'Autonomy or Dependence – or Both?: Perspectives from Bangladesh'. *Journal of Happiness Studies* 9 (1): 105–38. https://doi.org/10.1007/s10902-006-9022-5.

Diemer, Matthew A., Rashmita S. Mistry, Martha E. Wadsworth, Irene López, and Faye Reimers. 2013. 'Best Practices in Conceptualizing and Measuring Social Class in Psychological Research'. *Analyses of Social Issues and Public Policy* 13 (1): 77–113. https://doi.org/10.1111/asap.12001.

Dodd, Helen F., Lily FitzGibbon, Brooke E. Watson, and Rachel J. Nesbit. 2021. 'Children's Play and Independent Mobility in 2020: Results from the British Children's Play Survey'. *International Journal of Environmental Research and Public Health* 18 (8): 4334. https://doi.org/10.3390/ijerph18084334. Drukker, Marjan, Charles Kaplan, Frans Feron, and Jim van Os. 2003. 'Children's Health-Related Quality of Life, Neighbourhood Socio-Economic Deprivation and Social Capital. A Contextual Analysis'. *Social Science & Medicine* 57 (5): 825–41. https://doi.org/10.1016/S0277-9536(02)00453-7.

Edwards, K. L., G. P. Clarke, J. K. Ransley, and J. Cade. 2010. 'The Neighbourhood Matters: Studying Exposures Relevant to Childhood Obesity and the Policy Implications in Leeds, UK'. *Journal of Epidemiology & Community Health* 64 (3): 194–201. https://doi.org/10.1136/jech.2009.088906.

Edwards, R. 2002. *Children, Home, and School: Regulation, Autonomy, Or Connection?* Future of Childhood Series. Routledge.

Egli, V., L. Mackay, C. Jelleyman, E. Ikeda, S. Hopkins, and M. Smith. 2020. 'Social Relationships, Nature, and Traffic: Findings from a Child-Centred Approach to Measuring Active School Travel Route Perceptions'. *Children's Geographies* 18 (6): 667–83. https://doi.org/10.1080/14733285.2019.1685074.

Elgot, J. 2021. *No 10 Says All Children Can Use Playgrounds to Exercise.* The Guardian. https://www.theguardian.com/world/2021/feb/11/ministers-backtrack-on-advice-only-children-without-gardens-can-play-outside

Emond, Ruth. 2005. 'Ethnographic Research Methods with Children and Young People'. In *Researching Children's Experience: Approaches and Methods*, 123–40. Sage.

England Marketing. 2009. Report to Natural England on Childhood and Nature: A Survey on Changing Relationships with Nature across Generations. Natural England. http://publications.naturalengland.org.uk/publication/5853658314964992.

Engwicht, David. 1992. *Towards an Eco-City: Calming the Traffic*. Sydney: Envirobook.

Ergler, Christina R., Robin Kearns, and Karen Witten. 2016. 'Exploring Children's Seasonal Play to Promote Active Lifestyles in Auckland, New Zealand'. *Health & Place* 41 (Supplement C): 67–77. https://doi.org/10.1016/j.healthplace.2016.07.001.

Evans, Gary W. 2006. 'Child Development and the Physical Environment'. *Annual Review of Psychology* 57 (1): 423–51.

https://doi.org/10.1146/annurev.psych.57.102904.190057.

Ewing, Reid, William Schroeer, and William Greene. 2004. 'School Location and Student Travel: Analysis of Factors Affecting Mode Choice'. *Transportation Research Record*, no. 1895: 55–63.

Fattore, Tobia, Jan Mason, and Elizabeth Watson. 2016. *Children's Understandings of Well-Being: Towards a Child Standpoint*. Springer.

Ferguson, Kristin M. 2006. 'Social Capital and Children's Wellbeing: A Critical Synthesis of the International Social Capital Literature'. *International Journal of Social Welfare* 15 (1): 2–18. https://doi.org/10.1111/j.1468-2397.2006.00575.x.

Fetterman D. 2010. Ethnography, Step-by-Step. 3rd edition. Los Angles: SAGE

Fielding, Shaun. 2000. 'Walk on the Left! Children's Geographies and the Primary School'. In *Children's Geographies: Playing, Living, Learning*. Routledge.

Floyd, Myron F., Jason N. Bocarro, William R. Smith, Perver K. Baran, Robin C. Moore, Nilda G. Cosco, Michael B. Edwards, Luis J. Suau, and Kunsheng Fang. 2011. 'Park-Based Physical Activity among Children and Adolescents'. *American Journal of Preventive Medicine* 41 (3): 258–65. https://doi.org/10.1016/j.amepre.2011.04.013.

Foster, Sarah, Karen Villanueva, Lisa Wood, Hayley Christian, and Billie Giles-Corti. 2014. 'The Impact of Parents' Fear of Strangers and Perceptions of Informal Social Control on Children's Independent Mobility'. *Health & Place* 26 (March): 60–68. https://doi.org/10.1016/j.healthplace.2013.11.006.

Foster, Sarah, Lisa Wood, Jacinta Francis, Matthew Knuiman, Karen Villanueva, and Billie Giles-Corti. 2015. 'Suspicious Minds: Can Features of the Local Neighbourhood Ease Parents' Fears about Stranger Danger?' *Journal of Environmental Psychology* 42 (Supplement C): 48–56. https://doi.org/10.1016/j.jenvp.2015.02.001.

Fotel, Trine, and Thyra Uth Thomsen. 2002. 'The Surveillance of Children's Mobility.' *Surveillance & Society* 1 (4). https://ojs.library.queensu.ca/index.php/surveillance-and-society/article/view/3335.

Freeman, Claire, and Paul J. Tranter. 2011. *Children and Their Urban Environment: Changing Worlds*. Routledge.

Furedi, Frank. 2006. Culture of Fear Revisited. A&C Black.

Fyhri, Aslak, and Randi Hjorthol. 2009. 'Children's Independent Mobility to School, Friends and Leisure Activities'. *Journal of Transport Geography* 17 (5): 377–84. https://doi.org/10.1016/j.jtrangeo.2008.10.010.

Fyhri, Aslak, Randi Hjorthol, Roger L. Mackett, Trine Nordgaard Fotel, and Marketta Kyttä. 2011. 'Children's Active Travel and Independent Mobility in Four Countries: Development, Social Contributing Trends and Measures'. *Transport Policy* 18 (5): 703–10. https://doi.org/10.1016/j.tranpol.2011.01.005.

Gagen, Elizabeth. 2000. 'Playing the Part: Performing Gender in America's Playgrounds'. In *Children's Geographies: Playing, Living, Learning*. Routledge.

Galinsky, Ellen. 1999. *Ask the Children: What America's Children Really Think About Working Parents*. New York: William Morrow & Co.

Gardner, Paula J. 2011. 'Natural Neighborhood Networks — Important Social Networks in the Lives of Older Adults Aging in Place'. *Journal of Aging Studies*, Special Section: Age and the Cultivation of Place, 25 (3): 263–71. https://doi.org/10.1016/j.jaging.2011.03.007.

Gaster, Sanford. 1991. 'Urban Children's Access to Their Neighborhood: Changes Over Three Generations'. *Environment and Behavior* 23 (1): 70–85. https://doi.org/10.1177/0013916591231004.

Gehl, Jan. 2011. Life Between Buildings: Using Public Space. Island Press.

Gibson, James. 1979. The Ecological Approach to Visual Perception. Routledge.

Gifford, Robert. 2007. 'The Consequences of Living in High-Rise Buildings'. *Architectural Science Review* 50 (1): 2–17. https://doi.org/10.3763/asre.2007.5002.

Giles-Corti, Billie, Sally F. Kelty, Stephen R. Zubrick, and Karen P. Villanueva. 2009. 'Encouraging Walking for Transport and Physical Activity in Children and Adolescents: How Important Is the Built Environment?' *Sports Medicine (Auckland, N.Z.)* 39 (12): 995–1009. https://doi.org/10.2165/11319620-0000000000-00000.

Giles-Corti, Billie, Jennifer Robertson-Wilson, Lisa Wood, and Ryan Falconer. 2010. 'The Role of the Changing Built Environment in Shaping Our Shape'. In *Geographies of Obesity: Environmental Understandings of the Obesity Epidemic*. Ashgate.

Gill, T. 2007. Can I Play out? - Lessons from London Play's Home Zones Project. London Play. Gill, Tim. 2007. *No Fear: Growing Up in a Risk Averse Society*. London: Calouste Gulbenkian Foundation.

Gill, Tim. 2008. 'Space-Oriented Children's Policy: Creating Child-Friendly Communities to Improve Children's Well-Being1'. *Children & Society* 22 (2): 136–42. https://doi.org/10.1111/j.1099-0860.2007.00139.x.

Gillespie, Judy. 2013. 'Being and Becoming: Writing Children into Planning Theory'. *Planning Theory* 12 (1): 64–80. https://doi.org/10.1177/1473095212441696.

Gillies, Val, Rosalind Edwards, and Nicola Horsley. 2017. *Challenging the Politics of Early Intervention*. The Policy Press.

Ginsburg, Kenneth R. 2007. 'The Importance of Play in Promoting Healthy Child Development and Maintaining Strong Parent-Child Bonds'. *Pediatrics* 119 (1): 182–91. https://doi.org/10.1542/peds.2006-2697.

Gittus, Elizabeth. 1976. Flats, Families and the under-Fives. Routledge & K. Paul.

Glouberman, Sholom, Michael Gemar, Philippa Campsie, Glenn Miller, Jim Armstrong, Chayim Newman, Ariadne Siotis, and Philip Groff. 2006. 'A Framework for Improving Health in Cities: A Discussion Paper'. *Journal of Urban Health* 83 (2): 325–38. https://doi.org/10.1007/s11524-006-9034-9.

González-Carrasco, Mònica, Cristina Vaqué, Sara Malo, Gemma Crous, Ferran Casas, and Cristina Figuer. 2018. 'A Qualitative Longitudinal Study on the Well-Being of Children and Adolescents'. *Child Indicators Research*, January, 1–21. https://doi.org/10.1007/s12187-018-9534-7.

Goodman, Anna, Angie S Page, and Ashley R Cooper. 2014. 'Daylight Saving Time as a Potential Public Health Intervention: An Observational Study of Evening Daylight and Objectively-Measured Physical Activity among 23,000 Children from 9

Countries'. *The International Journal of Behavioral Nutrition and Physical Activity* 11 (October). https://doi.org/10.1186/1479-5868-11-84.

Greater London Authority. 2018. *Mayor's Transport Strategy*. Mayor of London. https://www.london.gov.uk/sites/default/files/mayors-transport-strategy-2018.pdf

Greater London Authority. 2020. *Making London Child-Friendly*. Mayor of London. https://www.london.gov.uk/sites/default/files/ggbd_making_london_child-friendly.pdf

Greater London Authority. 2021. *The London Plan*. Mayor of London. https://www.london.gov.uk/sites/default/files/the_london_plan_2021.pdf

Hackney Council. 2015a. *Hackney Transport Strategy: 2015-2025.* London Borough of Hackney. https://hackney.gov.uk/transport-strategy

Hackney Council. 2015b. *Homerton Ward Profile*. London Borough of Hackney. https://hackney.gov.uk/hackney-ward-profiles

Hackney Council. 2015c. *Lea Bridge Ward Profile*. London Borough of Hackney. https://hackney.gov.uk/hackney-ward-profiles

Hackney Council. 2015d. *Victoria Ward Profile*. Hackney Council. https://hackney.gov.uk/hackney-ward-profiles

Hackney Council, 2015e. *Stoke Newington Ward Profile*. London Borough of Hackney. https://hackney.gov.uk/hackney-ward-profiles

Hackney Council. 2019. *Knowing Our Communities*. 2019. https://hackney.gov.uk/knowing-our-communities.

Hackney Council. 2021. *Growing up in Hackney: Child-Friendly Places*Supplementary Planning Document. https://hackney.gov.uk/child-friendly-spd.

Han, Christina, Yingyi Lin, Louise Mâsse, and Mariana Brussoni. 2020. "There's Kind of a Wall I Have to Stay inside of": A Qualitative Understanding of Children's Independent Mobility Range, Destination, Time and Expansion'. *Children, Youth and Environments* 30 (2): 97–118. https://doi.org/10.7721/chilyoutenvi.30.2.0097.

Handy, Susan, Xinyu Cao, and Patricia Mokhtarian. 2008. 'Neighborhood Design and Children's Outdoor Play: Evidence from Northern California'. *Children, Youth and Environments* 18 (2): 160–79.

Hart, J., and G. Parkhurst. 2011. 'Driven to Excess: Impacts of Motor Vehicles on the Quality of Life of Residents of Three Streets in Bristol UK'. *World Transport Policy & Practice* 17 (2): 12–30.

Hart, Roger. 1979. *Children's Experience of Place*. John Wiley and Sons Inc.

Harten, Nathan, and Tim Olds. 2004. 'Patterns of Active Transport in 11-12 Year Old Australian Children'. *Australian and New Zealand Journal of Public Health* 28 (2): 167–72.

Heft, Harry. 1988. 'Affordances of Children's Environments: a Functional Approach to Environmental Description'. *Children's Environments Quarterly* 5 (3): 29–37.

Hensher, David A., and April J. Reyes. 2000. 'Trip Chaining as a Barrier to the Propensity to Use Public Transport'. *Transportation* 27 (4): 341–61. https://doi.org/10.1023/A:1005246916731.

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

Hinckson, Erica A., and Hannah M. Badland. 2011. 'School Travel Plans: Preliminary Evidence for Changing School-Related Travel Patterns in Elementary School

Children'. *American Journal of Health Promotion* 25 (6): 368–71. https://doi.org/10.4278/ajhp.090706-ARB-217.

Hinckson, Erica, and Guy Faulkner. 2018. '14 - School Travel Plans'. In *Children's Active Transportation*, edited by Richard Larouche, 205–16. Elsevier. https://doi.org/10.1016/B978-0-12-811931-0.00014-4.

Hollingworth, Sumi, and Louise Archer. 2010. 'Urban Schools as Urban Places: School Reputation, Children's Identities and Engagement with Education in London'. *Urban Studies* 47 (3): 584–603. https://doi.org/10.1177/0042098009349774.

Holloway, Sarah L., and Helena Pimlott-Wilson. 2018. 'Reconceptualising Play: Balancing Childcare, Extra-Curricular Activities and Free Play in Contemporary Childhoods'. *Transactions of the Institute of British Geographers* 43 (3): 420–34. https://doi.org/10.1111/tran.12230.

Holloway, Sarah L., and Gill Valentine. 2000. *Children's Geographies: Playing, Living, Learning*. Routledge.

Holt, John Caldwell. 1974. Escape from Childhood. Holt Associates.

Hopkinson, L, A Goodman, A Thomas, R Aldred, and L Sloman. 2021. *School Streets: Reducing Children's Exposure to Toxic Air Pollution and Road Danger.*Report by Transport for Quality of Life and Active Travel Academy for Possible and Mums for Lungs

https://static1.squarespace.com/static/5d30896202a18c0001b49180/t/5ff86080e72bb40340c83efa/1610113159846/School+Streets+-+Possible.pdf.

Horschelmann, K, and L van Blerk. 2013. Children, Youth and the City. Routledge.

Horton, John, P. Christensen, Peter Kraftl, and Sophie Hadfield-Hill. 2014. "Walking ... Just Walking": How Children and Young People's Everyday Pedestrian Practices Matter'. *Social and Cultural Geography* 15 (1): 94–115.

Horton, John and Peter Kraftl. 2017. 'Three Playgrounds: Researching the Multiple Geographies of Children's Outdoor Play'. *Environment and Planning A*, October, 0308518X17735324. https://doi.org/10.1177/0308518X17735324.

Horton, Richard. 2018. 'Offline: The UK's Child Health Emergency'. *The Lancet* 392 (10142): 106. https://doi.org/10.1016/S0140-6736(18)31614-3.

Hsin, Amy, and Christina Felfe. 2014. 'When Does Time Matter? Maternal Employment, Children's Time With Parents, and Child Development'. *Demography* 51 (5): 1867–94. https://doi.org/10.1007/s13524-014-0334-5.

Huertas-Delgado, Francisco Javier, Lieze Mertens, Palma Chillon, and Delfien Van Dyck. 2018. 'Parents' and Adolescents' Perception of Traffic- and Crime-Related Safety as Correlates of Independent Mobility among Belgian Adolescents'. *PLoS ONE* 23 (9). https://doi.org/10.1371/journal.pone.0204454.

Islam, Mohammed Zakiul, Robin Moore, and Nilda Cosco. 2016. 'Child-Friendly, Active, Healthy Neighborhoods: Physical Characteristics and Children's Time Outdoors'. *Environment and Behavior* 48 (5): 711–36. https://doi.org/10.1177/0013916514554694.

Jago. 2017. 'Associations between Participation in Organised Physical Activity in the School or Community Outside School Hours and Neighbourhood Play with Child Physical Activity and Sedentary Time: A Cross-Sectional Analysis of Primary School-Aged Children from the UK'. *BMJ Open*, no. Vol. 7; No. 9. https://doi.org/10.1136/bmjopen-2017-017588.

James, Allison, Chris Jenks, and Alan Prout. 1998. *Theorizing Childhood*. Teachers College Press.

James, Allison, and Alan Prout. 1997. *Constructing and Reconstructing Childhood:*Contemporary Issues in the Sociological Study of Childhood. Psychology Press.

Janssen, Ian, and Nathan King. 2015. 'Walkable School Neighborhoods Are Not Playable Neighborhoods'. *Health & Place* 35 (September): 66–69. https://doi.org/10.1016/j.healthplace.2015.07.004.

Jenks, Chris. 2005. *Childhood: Second Edition*. 2 edition. London; New York: Routledge.

Jenks, Mike, and Nicola Dempsey. 2007. 'Defining the Neighbourhood: Challenges for Empirical Research'. *Town Planning Review* 78: 153–77. https://doi.org/10.3828/tpr.78.2.4.

Joerchel, Amrei C. 2015. 'Personal Life Space: Learning from Martha Muchow's Classic Study'. *Culture & Psychology* 21 (4): 546–65. https://doi.org/10.1177/1354067X15615813.

Kahneman, Daniel, Edward Diener, and Norbert Schwarz. 1999. *Well-Being:* Foundations of Hedonic Psychology. Russell Sage Foundation.

Kaplan, Rachel, and Stephen Kaplan. 1989. *The Experience of Nature: A Psychological Perspective*. CUP Archive.

Karsten, Lia. 2005. 'It All Used to Be Better? Different Generations on Continuity and Change in Urban Children's Daily Use of Space'. *Children's Geographies* 3 (3): 275–90. https://doi.org/10.1080/14733280500352912.

Karsten, Lia, and Willem van Vliet. 2006. 'Children in the City: Reclaiming the Street'. *Children, Youth and Environments* 16 (1): 151–67.

Katz, Cindi. 2002. 'Stuck in Place: Children and the Globalization of Social Reproduction'. In *Geographies of Global Change: Remapping the World*, edited by R. J. Johnston, Peter J. Taylor, and Michael Watts, 2nd ed.

Katz, Cindi. 2008. 'Cultural Geographies Lecture: Childhood as Spectacle: Relays of Anxiety and the Reconfiguration of the Child'. *Cultural Geographies* 15 (1): 5–17. https://doi.org/10.1177/1474474007085773.

Kelty, SF, Billie Giles-Corti, and S. R. Zubrick. 2008. 'Physical Activity and Young People: The Impact of the Built Environment in Encouraging Play, Fun and Being Active'. In *Physical Activity and Children: New Research*. Nova Science Publishers Inc.

Keshavarz, Nastaran, Don Nutbeam, Louise Rowling, and Freidoon Khavarpour. 2010. 'Schools as Social Complex Adaptive Systems: A New Way to Understand the Challenges of Introducing the Health Promoting Schools Concept'. *Social Science & Medicine* 70 (10): 1467–74. https://doi.org/10.1016/j.socscimed.2010.01.034.

Kinoshita, Isami. 2009. 'Charting Generational Differences in Conceptions and Opportunities for Play in a Japanese Neighborhood'. *Journal of Intergenerational Relationships* 7 (1): 53–77. https://doi.org/10.1080/15350770802629024.

Kirby, Joanna, and Jo Inchley. 2013. 'Walking Behaviours among Adolescent Girls in Scotland: A Pilot Study'. *Health Education* 113 (1): 28–51. https://doi.org/10.1108/09654281311293628.

Kirkby, MaryAnn. 1989. 'Nature as Refuge in Children's Environments.' *Children's Environments Quarterly*, 6(1), 7–12.

Kreutz, Angela. 2015. *Children and the Environment in an Australian Indigenous Community: A Psychological Approach*. Routledge.

Kullman, Kim. 2014. 'Children, Urban Care, and Everyday Pavements . *Environment and Planning A: Economy and Space* 46 (12): 2864–80. https://doi.org/10.1068/a46260.

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 (2): 179–98. https://doi.org/10.1016/S0272-4944(03)00073-2.

Kyttä, A. Marketta, Anna K. Broberg, and Maarit H. Kahila. 2012. 'Urban Environment and Children's Active Lifestyle: SoftGIS Revealing Children's Behavioral Patterns and Meaningful Places'. *American Journal of Health Promotion: AJHP* 26 (5): e137-148. https://doi.org/10.4278/ajhp.100914-QUAN-310.

Kyttä, Marketta, Jukka Hirvonen, Julie Rudner, Iiris Pirjola, and Tiina Laatikainen. 2015. 'The Last Free-Range Children? Children's Independent Mobility in Finland in the 1990s and 2010s'. *Journal of Transport Geography* 47 (Supplement C): 1–12. https://doi.org/10.1016/j.jtrangeo.2015.07.004.

Lambert, Amalie, Janae Vlaar, Susan Herrington, and Mariana Brussoni. 2019. 'What Is the Relationship between the Neighbourhood Built Environment and Time Spent in Outdoor Play? A Systematic Review'. *International Journal of Environmental Research and Public Health* 16 (20): 3840. https://doi.org/10.3390/ijerph16203840.

Lareau, Annette. 2011. *Unequal Childhoods: Class, Race, and Family Life*. University of California Press.

Larsen, Kristian, Jason Gilliland, Paul Hess, Patricia Tucker, Jennifer Irwin, and Meizi He. 2009. 'The Influence of the Physical Environment and Sociodemographic Characteristics on Children's Mode of Travel to and From School'. *American Journal of Public Health* 99 (3): 520–26. https://doi.org/10.2105/AJPH.2008.135319.

Layard, Richard, and Judy Dunn. 2009. *A Good Childhood: Searching for Values in a Competitive Age*. Penguin.

Lee, Homan, Katherine A. Tamminen, Alexander M. Clark, Linda Slater, John C. Spence, and Nicholas L. Holt. 2015. 'A Meta-Study of Qualitative Research Examining Determinants of Children's Independent Active Free Play'. *International Journal of Behavioral Nutrition and Physical Activity* 12 (1): 5. https://doi.org/10.1186/s12966-015-0165-9.

Lee, Jo, and Tim Ingold. 2006. 'Fieldwork on Foot: Perceiving, Routing, Socializing'. In *Locating the Field: Space, Place and Context in Anthropology*. Berg Publishers.

Lester, Stuart, and Wendy Russell. 2008. *Play for a Change: Play, Policy and Practice - A Review of Contemporary Perspectives*. London England: National Children's Bureau.

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 & Place* 46 (Supplement C): 107–13. https://doi.org/10.1016/j.healthplace.2017.05.002.

Liu, William Ming, Saba Rasheed Ali, Geoff Soleck, Joshua Hopps, Kwesi dunston, and Theodore Pickett Jr. 2004. 'Using Social Class in Counseling Psychology Research'. *Journal of Counseling Psychology* 51 (1): 3–18. https://doi.org/10.1037/0022-0167.51.1.3.

Loebach, Janet E., and Jason A. Gilliland. 2016. 'Free Range Kids? Using GPS-Derived Activity Spaces to Examine Children's Neighborhood Activity and Mobility'. *Environment and Behavior* 48 (3): 421–53. https://doi.org/10.1177/0013916514543177.

Lolichen, P. J., Jyoti Shenoy, Anuradha Shetty, Christie Nash, and M. Venkatesh. 2006. 'Children in the Driver's Seat'. *Children's Geographies* 4 (3): 347–57. https://doi.org/10.1080/14733280601016812.

Low, Setha M., and Irwin Altman. 1992. 'Place Attachment'. In *Place Attachment*, edited by Irwin Altman and Setha M. Low, 1–12. Human Behavior and Environment. Boston, MA: Springer US. https://doi.org/10.1007/978-1-4684-8753-4_1.

Luttrell, Wendy. 2000. "Good Enough" Methods for Ethnographic Research'. Harvard Educational Review 70 (December).

Mackett, R. 2004. *Making Children's Lives More Active*. London, UK: Centre for Transport Studies, University College London. http://discovery.ucl.ac.uk/1346/.

Mackett, Roger, Belinda Brown, Yi Gong, Kay Kitazawa, and James Paskins. 2007. *Children's Independent Movement in the Local Environment*. Vol. 33. https://doi.org/10.2148/benv.33.4.454.

Mackett, Roger L., and James Paskins. 2008. 'Children's Physical Activity: The Contribution of Playing and Walking'. *Children & Society* 22 (5): 345–57. https://doi.org/10.1111/j.1099-0860.2007.00113.x.

Malone, Karen. 2016. 'Reconsidering Children's Encounters With Nature and Place Using Posthumanism'. *Australian Journal of Environmental Education* 32 (1): 42–56. https://doi.org/10.1017/aee.2015.48.

Markevych, Iana, Elisabeth Thiering, Elaine Fuertes, Dorothea Sugiri, Dietrich Berdel, Sibylle Koletzko, Andrea von Berg, Carl-Peter Bauer, and Joachim Heinrich. 2014. 'A Cross-Sectional Analysis of the Effects of Residential Greenness on Blood Pressure in 10-Year Old Children: Results from the GINIplus and LISAplus Studies'. *BMC Public Health* 14 (May): 477. https://doi.org/10.1186/1471-2458-14-477.

Marzi, Isabel, Yolanda Demetriou, and Anne Kerstin Reimers. 2018. 'Social and Physical Environmental Correlates of Independent Mobility in Children: A Systematic Review Taking Sex/Gender Differences into Account'. *International Journal of Health Geographics* 17 (July). https://doi.org/10.1186/s12942-018-0145-9.

Marzi, Isabel, and Anne Kerstin Reimers. 2018. 'Children's Independent Mobility: Current Knowledge, Future Directions, and Public Health Implications'. *International Journal of Environmental Research and Public Health* 15 (11): 2441. https://doi.org/10.3390/ijerph15112441.

Matthews, Hugh, Mark Taylor, Kenneth Sherwood, Faith Tucker, and Melanie Limb. 2000. 'Growing-up in the Countryside: Children and the Rural Idyll'. *Journal of Rural Studies* 16 (2): 141–53. https://doi.org/10.1016/S0743-0167(99)00059-5.

Matthews, H., M. Limb, and M. Taylor. 1999. 'Reclaiming the Street: The Discourse of Curfew'. *Environment and Planning A: Economy and Space* 31 (10): 1713–30. https://doi.org/10.1068/a311713.

Matthews, Hugh. 1998. 'The Geography of Children: Some Ethical and Methodological Considerations for Project and Dissertation Work'. *Journal of Geography in Higher Education* 22 (3): 311–24. https://doi.org/10.1080/03098269885723.

Matthews, Hugh. 2003. 'Children and Regeneration: Setting an Agenda for Community Participation and Integration'. *Children & Society* 17 (4): 264–76. https://doi.org/10.1002/CHI.745.

Matthews, Michael Hugh. 1992. *Making Sense of Place: Children's Understanding of Large-Scale Environments*. Harvester Wheatsheaf.

Mauthner, Melanie. 1997. 'Methodological Aspects of Collecting Data from Children: Lessons from Three Research Projects'. *Children & Society* 11 (1): 16–28. https://doi.org/10.1111/j.1099-0860.1997.tb00003.x.

May-Chahal, Corinne, and Pat Cawson. 2005. 'Measuring Child Maltreatment in the United Kingdom: A Study of the Prevalence of Child Abuse and Neglect'. *Child Abuse & Neglect* 29 (9): 969–84. https://doi.org/10.1016/j.chiabu.2004.05.009.

McCarthy, Margaret M. 2016. 'Multifaceted Origins of Sex Differences in the Brain'. *Phil. Trans. R. Soc. B* 371 (1688): 20150106. https://doi.org/10.1098/rstb.2015.0106.

McKendrick, John. 2014. 'Geographies of Children's Well-Being: In, of and for Place'. In *Handbook of Child Well-Being*. Springer.

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.

McMinn, David, David A. Rowe, Shemane Murtagh, and Norah M. Nelson. 2012. 'The Effect of a School-Based Active Commuting Intervention on Children's Commuting Physical Activity and Daily Physical Activity'. *Preventive Medicine* 54 (5): 316–18. https://doi.org/10.1016/j.ypmed.2012.02.013. Met Office. 2020. 'Hampstead (Greater London) UK Climate Averages'. Met Office. 2020. https://www.metoffice.gov.uk/research/climate/maps-and-data/uk-climate-averages/gcpv7fnqu.

Metz, David. 2015. 'Peak Car in the Big City: Reducing London's Transport Greenhouse Gas Emissions'. *Case Studies on Transport Policy* 3 (4): 367–71. https://doi.org/10.1016/j.cstp.2015.05.001.

Mey, Gunter, and Hartmut Günther. 2015. *The Life Space of the Urban Child: Perspectives on Martha Muchow's Classic Study*. Routledge.

Middleton, Jennie. 2016. 'The Socialities of Everyday Urban Walking and the "Right to the City". *Urban Studies*, July, 0042098016649325. https://doi.org/10.1177/0042098016649325.

Mikkelsen, Miguel Romero, and Pia Christensen. 2009. 'Is Children's Independent Mobility Really Independent? A Study of Children's Mobility Combining Ethnography and GPS/Mobile Phone Technologies'. *Mobilities* 4 (1): 37–58. https://doi.org/10.1080/17450100802657954.

Millfields School. 2019. *Pupil Premium 2019-20.* Millfields School. http://www.millfields.hackney.sch.uk/index.php?page=Pupil-Premium-2017.

Milne, Sue. 2009. 'Moving Into and Through the Public World: Children's Perspectives on Their Encounters with Adults'. *Mobilities* 4 (1): 103–18. https://doi.org/10.1080/17450100802657988.

Ministry of Housing, Communities and Local Government. 2019a. *File 1: IMD 2019 - Index of Mutiple Deprivation.* UK Government.

https://www.gov.uk/government/statistics/english-indices-of-deprivation-2019.

Ministry of Housing, Communities and Local Government. 2019b. *The English Indices of Deprivation 2019: Statistical Release*. Ministry of Housing, Communities and Local Government.

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/835115/loD2019_Statistical_Release.pdf.

Ministry of Housing Communities and Local Government. 2021. *National Planning Policy Framework*. UK Government.

Mitchell, Hannah, Robin A. Kearns, and Damian C. A. Collins. 2007. 'Nuances of Neighbourhood: Children's Perceptions of the Space between Home and School in Auckland, New Zealand'. *Geoforum* 38 (4): 614–27. https://doi.org/10.1016/j.geoforum.2006.11.012.

Mitra, Raktim. 2013. 'Independent Mobility and Mode Choice for School Transportation: A Review and Framework for Future Research'. *Transport Reviews* 33 (1): 21–43. https://doi.org/10.1080/01441647.2012.743490.

Mitra, Raktim, and Ron N. Buliung. 2015. 'Exploring Differences in School Travel Mode Choice Behaviour between Children and Youth'. *Transport Policy* 42 (August): 4–11. https://doi.org/10.1016/j.tranpol.2015.04.005.

Moore, Robin C. 1986. *Childhood's Domain: Play and Place in Child Development*. Croom Helm.

Moore, Robin, and Donald Young. 1978. 'Childhood Outdoors: Toward a Social Ecology of the Landscape'. In *Children and the Environment*, edited by Irwin Altman and Joachim F. Wohlwill, 83–130. Human Behavior and Environment. Boston, MA: Springer US. https://doi.org/10.1007/978-1-4684-3405-7_4.

Mose, Tamara R. 2016. *The Playdate: Parents, Children and the New Expectations of Play.* NYU Press. http://www.jstor.org/stable/j.ctt1803zx4.

Mota, Jorge, Helena Gomes, Mariana Almeida, José Carlos Ribeiro, Joana Carvalho, and Maria Paula Santos. 2007. 'Active versus Passive Transportation to School–Differences in Screen Time, Socio-Economic Position and Perceived Environmental Characteristics in Adolescent Girls'. *Annals of Human Biology* 34 (3): 273–82. https://doi.org/10.1080/03014460701308615.

Munoz, Sarah-Anne. 2009. 'Children in the Outdoors: A Literature Review'. SDRC. http://www.auscamps.asn.au/wp-content/uploads/2016/03/Children_Outdoors_Lit_Review_UK.pdf.

Murray, Lesley, and Susana Cortés-Morales. 2019. *Children's Mobilities: Interdependent, Imagined, Relational.* Springer.

Murray, Lesley, and Kanwal Mand. 2013. 'Travelling near and Far: Placing Children's Mobile Emotions'. *Emotion, Space and Society*, Children's Emotional Geographies, 9 (November): 72–79. https://doi.org/10.1016/j.emospa.2013.02.005.

Nansen, Bjorn, Lisa Gibbs, Colin MacDougall, Frank Vetere, Nicola J. Ross, and John McKendrick. 2015. 'Children's Interdependent Mobility: Compositions, Collaborations and Compromises'. *Children's Geographies* 13 (4): 467–81. https://doi.org/10.1080/14733285.2014.887813.

Nayak, Anoop. 2003. "Through Children's Eyes": Childhood, Place and the Fear of Crime'. *Geoforum* 34 (3): 303–15. https://doi.org/10.1016/S0016-7185(03)00003-4.

NEF. 2004. 'The Power and Potential of Well-Being Indicators: Measuring Young People's Well-Being in Nottingham'. NEF.

Newson, John, and Elizabeth Newson. 2017. *Seven Years Old in the Home Environment*. Routledge.

Nilfanion. 2021. *Greater London UK district map, created using Ordnance Survey data derivative work.* https://commons.wikimedia.org/w/index.php?curid=16282133

Nock, Steven L., and Paul William Kingston. 1988. 'Time with Children: The Impact of Couples' Work-Time Commitments'. *Social Forces* 67 (1): 59–85. https://doi.org/10.2307/2579100.

Nordström, Maria. 2010. 'Children's Views on Child-Friendly Environments in Different Geographical, Cultural and Social Neighbourhoods'. *Urban Studies* 47 (3): 514–28. https://doi.org/10.1177/0042098009349771.

NSPCC. 2020. *Home Alone*. 2020. https://www.nspcc.org.uk/preventing-abuse/keeping-children-safe/leaving-child-home-alone/.

O'Brien, Margaret, Deborah Jones, David Sloan, and Michael Rustin. 2000. 'Children's Independent Spatial Mobility in the Urban Public Realm'. *Childhood* 7 (3): 257–77. https://doi.org/10.1177/0907568200007003002.

Ofsted. 2012. William Patten Primary School Ofsted Report. Ofsted. https://files.ofsted.gov.uk/v1/file/2161143.

Ofsted. 2014. *Orchard Primary School: Ofsted Report.* Ofsted. https://files.ofsted.gov.uk/v1/file/2353077.

Oldenburg, Ray. 2001. *Celebrating the Third Place: Inspiring Stories About the Great Good Places at the Heart of Our Communities*. Da Capo Press.

Oliver, Melody, and Grant Schofield. 2010. 'Childhood Obesity, Physical Activity and the Physical Environment'. In *Geographies of Obesity: Environmental Understandings of the Obesity Epidemic*. Ashgate.

ONS. 2013. 2011 Census - Office for National Statistics. ONS.

https://www.ons.gov.uk/peoplepopulationandcommunity/populationandmigration/populationestimates/bulletins/populationandhouseholdestimatesfortheunitedkingdom/20 11-03-21.

ONS. 2017. *Births in England and Wales - Office for National Statistics*. ONS. https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/livebirths/bulletins/birthsummarytablesenglandandwales/2016.

Opie, Iona Archibald, and Peter Opie. 1969. *Children's Games [by] Iona and Peter Opie*. New York: Oxford University Press.

Opree, Suzanna J., Moniek Buijzen, and Eva A. van Reijmersdal. 2018. 'Development and Validation of the Psychological Well-Being Scale for Children (PWB-c)'. *Societies* 8 (1): 18. https://doi.org/10.3390/soc8010018.

Orchard Primary School. 2019. *Pupil Premium Report 2019-2020*. Orchard Primary School. http://www.orchard.hackney.sch.uk/wp-content/uploads/sites/2/2019/10/PPG-Statement-2019-2020-ORCH.pdf.

Page, Angie S, Ashley R Cooper, Pippa Griew, Laura Davis, and Melvyn Hillsdon. 2009. 'Independent Mobility in Relation to Weekday and Weekend Physical Activity in Children Aged 10–11 Years: The PEACH Project'. *The International Journal of Behavioral Nutrition and Physical Activity* 6 (January): 2. https://doi.org/10.1186/1479-5868-6-2.

Pain, Rachel. 2006. 'Paranoid Parenting? Rematerializing Risk and Fear for Children'. *Social & Cultural Geography* 7 (2): 221–43. https://doi.org/10.1080/14649360600600585.

Panter, J. R., A. P. Jones, E. M. F. van Sluijs, and S. J. Griffin. 2010. 'Attitudes, Social Support and Environmental Perceptions as Predictors of Active Commuting

Behaviour in School Children'. *Journal of Epidemiology and Community Health* 64 (1): 41–48. https://doi.org/10.1136/jech.2009.086918.

Parent, Natasha, Martin Guhn, Mariana Brussoni, Alisa Almas, and Eva Oberle. 2021. 'Social Determinants of Playing Outdoors in the Neighbourhood: Family Characteristics, Trust in Neighbours and Daily Outdoor Play in Early Childhood'. *Canadian Journal of Public Health* 112 (1): 120–27. https://doi.org/10.17269/s41997-020-00355-w.

Pellegrini, Anthony D., and Peter K. Smith. 1998. 'The Development of Play During Childhood: Forms and Possible Functions'. *Child Psychology and Psychiatry Review* 3 (2): 51–57.

Philo, Chris, and Hester Parr. 2000. 'Institutional Geographies: Introductory Remarks'. *Geoforum*, Culture Industries and Cultural Policy; Globalizing Cities;, 31 (4): 513–21. https://doi.org/10.1016/S0016-7185(00)00018-X.

Pile, Steve, and N. J. Thrift. 1995. *Mapping the Subject: Geographies of Cultural Transformation*. Psychology Press.

Plowden, Ben. 2020. 'Creating Healthy Streets for Sustainable Cities – Delivering Public Health Benefits through Redesigning London's Streets'. *Cities & Health* 4 (2): 156–61. https://doi.org/10.1080/23748834.2019.1685852.

Pole, Christopher, Philip Mizen, and Angela Bolton. 1999. 'Realising Children's Agency in Research: Partners and Participants?' *International Journal of Social Research Methodology* 2 (1): 39–54. https://doi.org/10.1080/136455799295177.

Pollard, Elizabeth L., and Patrice D. Lee. 2003. 'Child Well-Being: A Systematic Review of the Literature'. *Social Indicators Research* 61 (1): 59–78. https://doi.org/10.1023/A:1021284215801.

Pooley, Colin G. 2011. 'Young People, Mobility and the Environment: An Integrative Approach'. In *Mobilities: New Perspectives on Transport and Society*.

Pooley, Colin G., and Jean Turnbull. 2000. 'Modal Choice and Modal Change: The Journey to Work in Britain since 1890'. *Journal of Transport Geography* 8 (1): 11–24. https://doi.org/10.1016/S0966-6923(99)00031-9.

Pooley, Colin G, Jean Turnbull, and Mags Adams. 2005. 'The Journey to School in Britain since the 1940s: Continuity and Change'. *Area* 37 (1): 43–53. https://doi.org/10.1111/j.1475-4762.2005.00605.x.

Pooley, Colin G., Jean Turnbull, and Mags Adams. 2017. *A Mobile Century?:* Changes in Everyday Mobility in Britain in the Twentieth Century. Routledge.

Porskamp, Tessa, Christina Ergler, Eva Pilot, Preeti Sushama, and Sandra Mandic. 2019. 'The Importance of Social Capital for Young People's Active Transport and Independent Mobility in Rural Otago, New Zealand'. *Health & Place* 60 (November): 102216. https://doi.org/10.1016/j.healthplace.2019.102216.

Porter, Libby, Ceridwen Spark, and Lisa de Kleyn. 2020. 'Navigating the Neighbourhood: Gender, Place and Agency in Children's Mobility'. *Children's Geographies* 0 (0): 1–12. https://doi.org/10.1080/14733285.2020.1787950.

Prezza, Miretta, Stefania Pilloni, Carmela Morabito, Cinzia Sersante, Francesca Romana Alparone, and Maria Vittoria Giuliani. 2001. 'The Influence of Psychosocial and Environmental Factors on Children's Independent Mobility and Relationship to Peer Frequentation'. *Journal of Community & Applied Social Psychology* 11 (6): 435–50. https://doi.org/10.1002/casp.643.

Proshansky, Harold, and Abbe Fabian. 1987. 'The Development of Place Identity in the Child'. In *Spaces for Children: The Built Environment and Child Development*. Plenum.

Prout, A, and A. James. 1997. 'A New Paradigm for the Sociology of Childhood? Provenance, Promise and Problems.' In *Constructing and Reconstructing Childhood: Contemporary Issues in the Sociological Study of Childhood*, 2nd ed. London: Falmer Press.

Prout, Alan, ed. 2004. *The Future of Childhood*. 1 edition. London; New York: Routledge.

Putnam, Robert D. 2001. *Bowling Alone: The Collapse and Revival of American Community*. Simon and Schuster.

Qiu, Lingyi, and Xuemei Zhu. 2017. 'Impacts of Housing and Community Environments on Children's Independent Mobility: A Systematic Literature Review' 4 (2): 12.

Qvortrup, Jens. 1994. *Childhood Matters: Social Theory, Practice and Politics*. Avebury.

Raghavan, Ramesh, and Anna Alexandrova. 2015. 'Toward a Theory of Child Well-Being'. *Social Indicators Research* 121 (3): 887–902. https://doi.org/10.1007/s11205-014-0665-z.

Ramanathan, Subha, Catherine O'Brien, Guy Faulkner, and Michelle Stone. 2014. 'Happiness in Motion: Emotions, Well-Being, and Active School Travel'. *The Journal of School Health* 84 (8): 516–23. https://doi.org/10.1111/josh.12172.

Rasmussen, Kim. 2004. 'Places for Children – Children's Places'. *Childhood* 11 (2): 155–73. https://doi.org/10.1177/0907568204043053.

Raymond, Christopher M., Marketta Kyttä, and Richard Stedman. 2017. 'Sense of Place, Fast and Slow: The Potential Contributions of Affordance Theory to Sense of Place'. *Frontiers in Psychology* 8. https://doi.org/10.3389/fpsyg.2017.01674.

Rees, Gwyther, Jonathan Bradshaw, Haridhan Goswami, and Antonia Keung. 2010. 'Understanding Children's Wellbeing: A National Survey of Young People's Wellbeing'. The Children's Society.

https://www.childrenssociety.org.uk/sites/default/files/tcs/research_docs/Understanding%20children%27s%20wellbeing_0.pdf.

Riazi, Negin A., Sébastien Blanchette, François Trudeau, Richard Larouche, Mark S. Tremblay, and Guy Faulkner. 2019. 'Correlates of Children's Independent Mobility in Canada: A Multi-Site Study'. *International Journal of Environmental Research and Public Health* 16 (16): 2862. https://doi.org/10.3390/ijerph16162862.

Rissotto, Antonella, and Maria Vittoria Giuliani. 2006. 'Learning Neighbourhood Environments: The Loss of Experience in a Modern World'. In *Children and Their Environments: Learning, Using and Designing Spaces*. Cambridge University Press.

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

Rivkin, Mary S. 1995. *The Great Outdoors: Restoring Children's Right to Play Outside*. Washington, D.C.: National Association for the Education of Young Children.

Rixon, Andy, Helen Lomax, and Lindsay O'Dell. 2019. 'Childhoods Past and Present: Anxiety and Idyll in Reminiscences of Childhood Outdoor Play and Contemporary Parenting Practices'. *Children's Geographies* 17 (5): 618–29. https://doi.org/10.1080/14733285.2019.1605047...

Romero, Vivian. 2015. 'Children's Experiences: Enjoyment and Fun as Additional Encouragement for Walking to School'. *Journal of Transport & Health* 2 (2): 230–37. https://doi.org/10.1016/j.jth.2015.01.002.

Rosen, Andrew. 2003. *The Transformation of British Life 1950-2000: A Social History*. Manchester University Press.

Ross, J.G., and G.G. Gilbert. 1987. *Summary of Findings from National Children and Youth Fitness Study II.* https://eric.ed.gov/?id=ED292780.

Ross, Nicola J. 2007. "My Journey to School ...": Foregrounding the Meaning of School Journeys and Children's Engagements and Interactions in Their Everyday Localities'. *Children's Geographies* 5 (4): 373–91. https://doi.org/10.1080/14733280701631833.

Rubin, Ron. 2012. 'Independence, Disengagement, and Discipline'. *Reclaiming Children and Youth* 21 (1): 42–45.

Rutter, Harry. 2012. 'The Single Most Important Intervention to Tackle Obesity...'. *International Journal of Public Health* 57 (4): 657–58. https://doi.org/10.1007/s00038-012-0385-6.

Ryan, Richard M., and Edward L. Deci. 2001. 'On Happiness and Human Potentials: A Review of Research on Hedonic and Eudaimonic Well-Being'. *Annual Review of Psychology* 52 (1): 141–66. https://doi.org/10.1146/annurev.psych.52.1.141.

Ryan, Richard M., and Edward L. Deci. 2020. 'Intrinsic and Extrinsic Motivation from a Self-Determination Theory Perspective: Definitions, Theory, Practices, and Future Directions'. *Contemporary Educational Psychology* 61 (April): 101860. https://doi.org/10.1016/j.cedpsych.2020.101860.

Ryff, Carol D. 1989. 'Happiness Is Everything, or Is It? Explorations on the Meaning of Psychological Well-Being'. *Journal of Personality and Social Psychology* 57 (6): 1069–81. https://doi.org/10.1037/0022-3514.57.6.1069.

Ryff, Carol D. 2014. 'Psychological Well-Being Revisited: Advances in the Science and Practice of Eudaimonia'. *Psychotherapy and Psychosomatics* 83 (1): 10–28. https://doi.org/10.1159/000353263.

Sallis, James F., Myron F. Floyd, Daniel A. Rodríguez, and Brian E. Saelens. 2012. 'The Role of Built Environments in Physical Activity, Obesity, and CVD'. *Circulation* 125 (5): 729–37. https://doi.org/10.1161/CIRCULATIONAHA.110.969022.

Samman, Emma. 2007. 'Psychological and Subjective Well-Being: A Proposal for Internationally Comparable Indicators'. *Oxford Development Studies* 35 (4): 459–86. https://doi.org/10.1080/13600810701701939.

Sandberg, Anette, and Tuula Vuorinen. 2008. 'Dimensions of Childhood Play and Toys'. *Asia-Pacific Journal of Teacher Education* 36 (2): 135–46. https://doi.org/10.1080/13598660801975790.

Sandstrom, Gillian M., and Elizabeth W. Dunn. 2014. 'Social Interactions and Well-Being: The Surprising Power of Weak Ties'. *Personality & Social Psychology Bulletin* 40 (7): 910–22. https://doi.org/10.1177/0146167214529799.

Schaefer-McDaniel, Nicole J. 2004. 'Conceptualizing Social Capital among Young People: Towards a New Theory'. *Children, Youth and Environments* 14 (1): 153–72.

Schlossberg, Marc, Jessica Greene, Page Paulsen Phillips, Bethany Johnson, and Bob Parker. 2006. 'School Trips: Effects of Urban Form and Distance on Travel Mode'. *Journal of the American Planning Association* 72 (3): 337–46. https://doi.org/10.1080/01944360608976755.

Schoeppe, Stephanie, Mitch J. Duncan, Hannah M. Badland, Melody Oliver, and Matthew Browne. 2014. 'Associations between Children's Independent Mobility and Physical Activity'. *BMC Public Health* 14 (January): 91. https://doi.org/10.1186/1471-2458-14-91.

Scott, Jacqueline. 2008. 'Children as Respondents: The Challenge for Quantitative Methods'. In *Research With Children: Perspectives and Practices*. Routledge.

Secured by Design. 2021. Secured by Design. https://www.securedbydesign.com/

Sener, Ipek N., and Chandra R. Bhat. 2007. 'An Analysis of the Social Context of Children's Weekend Discretionary Activity Participation'. *Transportation* 34 (6): 697–721. https://doi.org/10.1007/s11116-007-9125-9.

Sharmin, Samia, and Md. Kamruzzaman. 2017. 'Association between the Built Environment and Children's Independent Mobility: A Meta-Analytic Review'. *Journal of Transport Geography* 61 (May): 104–17. https://doi.org/10.1016/j.jtrangeo.2017.04.004.

Sharpe, Scott, and Paul Tranter. 2010. 'The Hope for Oil Crisis: Children, Oil Vulnerability and (in)Dependent Mobility'. *Australian Planner* 47 (4): 284–92. https://doi.org/10.1080/07293682.2010.526622.

Shaw, B., M. Bicket, B. Elliott, B. Fagan-Watson, E. Mocca, M. Hillman, and B. Fagan-Watson. 2015. 'Children's Independent Mobility: An International Comparison and Recommendations for Action'. Policy Studies Institute.

Shaw, B., B. Fagan-Watson, B. Frauendienst, A. Redecker, T. Jones, and M. Hillman. 2013. 'Children's Independent Mobility: A Comparative Study in England and Germany (1971-2010)'. Policy Studies Institute.

Simpson, Brian. 1997. 'Towards the Participation of Children and Young People in Urban Planning and Design'. *Urban Studies* 34 (5–6): 907–25.

Sixsmith, Jane, Collette Fleming, Sioban O'Higgins, and Saoirse Nic Gabhainn. 2007. 'Childrens', Parents' and Teachers' Perceptions of Child Wellbeing'. *Health Education* 107 (6): 511–23. https://doi.org/10.1108/09654280710827911.

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 (3): 339–54. https://doi.org/10.1080/14733280903024506.

Skelton, Tracey. 2000. 'Nothing to Do, Nowhere to Go?' Teenage Girls and "Public" Space in the Rhondda Valleys, South Wales'. In *Children's Geographies: Playing, Living, Learning*, 80–99. London: Routledge.

Smith, Fiona, and John Barker. 2000. "Out of School", In School: A Social Geography of out of School Childcare'. In *Children's Geographies: Playing, Living, Learning*. Routledge.

Snape, Matthew D., and Russell M. Viner. 2020. 'COVID-19 in Children and Young People'. *Science* 370 (6514): 286–88. https://doi.org/10.1126/science.abd6165.

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

Söderström, M., C. Boldemann, U. Sahlin, F. Mårtensson, A. Raustorp, and M. Blennow. 2013. 'The Quality of the Outdoor Environment Influences Childrens Health -- a Cross-Sectional Study of Preschools'. *Acta Paediatrica (Oslo, Norway: 1992)* 102 (1): 83–91. https://doi.org/10.1111/apa.12047.

Solomon, Juliet. 1993. 'Escorting: Balancing the Advantages and the Disadvantages'. In *Children, Transport and the Quality of Life*. Policy Studies Institute.

Southworth, Michael. 2005. 'Designing the Walkable City'. *Journal of Urban Planning and Development* 131 (4): 246–57. https://doi.org/10.1061/(ASCE)0733-9488(2005)131:4(246).

Spilsbury, James C. 2005. "We Don't Really Get to Go out in the Front Yard"— Children's Home Range and Neighborhood Violence'. *Children's Geographies* 3 (1): 79–99. https://doi.org/10.1080/14733280500037281.

Sport England. 2021. *Active Lives Children and Young People Survey: Academic Year 2019/20. Sport* England. https://www.sportengland.org/know-your-audience/data/active-lives

Stark, Juliane, Michael Meschik, Patrick A. Singleton, and Bettina Schützhofer. 2018. 'Active School Travel, Attitudes and Psychological Well-Being of Children'. *Transportation Research Part F: Traffic Psychology and Behaviour* 56 (July): 453–65. https://doi.org/10.1016/j.trf.2018.05.007.

Statham, June, and Elaine Chase. 2010. 'Childhood Wellbeing: A Brief Overview'. Childhood Wellbeing Research Centre.

https://www.gov.uk/government/publications/childhood-wellbeing-a-brief-overview.

Stone, Michelle R., Guy EJ Faulkner, Raktim Mitra, and Ron N. Buliung. 2014. 'The Freedom to Explore: Examining the Influence of Independent Mobility on Weekday, Weekend and after-School Physical Activity Behaviour in Children Living in Urban and Inner-Suburban Neighbourhoods of Varying Socioeconomic Status'. *International Journal of Behavioral Nutrition and Physical Activity* 11 (January): 5. https://doi.org/10.1186/1479-5868-11-5.

Strandell, Harriet. 2014. 'Mobile Phones in Children's after-School Centres: Stretching of Place and Control'. *Mobilities* 9 (2): 256–74. https://doi.org/10.1080/17450101.2013.802488.

Sturm, Roland. 2005. 'Childhood Obesity -- What We Can Learn from Existing Data on Societal Trends, Part 2'. *Preventing Chronic Disease* 2 (2): A20.

Tainio, Matti. 2018. 'Contemporary Physical Activities: The Aesthetic Justification'. *Sport in Society* 0 (0): 1–15. https://doi.org/10.1080/17430437.2018.1430483.

TCPA. 2021. 20-Minute Neighbourhoods. TCPA.

https://www.tcpa.org.uk/Handlers/Download.ashx?IDMF=f214c4b8-ba4d-4196-9870-e9d240f86645.

The Children's Society. 2012. *The Good Childhood Report: A Review of Our Children's Well-Being.* The Children's Society.

https://www.childrenssociety.org.uk/sites/default/files/good_childhood_report_2012_f inal_0.pdf.

The Good Schools Guide. 2020. *Millfields Community School*. The Good Schools Guide. 2020. https://www.goodschoolsguide.co.uk/schools/millfields-community-school-london.

Snaith, Bridget. 2015. *The Queen Elizabeth Olympic Park: Whose Values, Whose Benefits.* PhD thesis. City, University of London.

https://openaccess.city.ac.uk/id/eprint/19291/1/Snaith,%20Bridget%20(redacted).pdf.

Thomson, Joanne L., and Chris Philo. 2004. 'Playful Spaces? A Social Geography of Children's Play in Livingston, Scotland'. *Children's Geographies* 2 (1): 111–30. https://doi.org/10.1080/1473328032000168804.

Thomson, Mathew. 2013. Lost Freedom: The Landscape of the Child and the British Post-War Settlement. OUP Oxford.

Thomson, Sarah. 2005. "Territorialising" the Primary School Playground: Deconstructing the Geography of Playtime'. *Children's Geographies* 3 (1): 63–78. https://doi.org/10.1080/14733280500037224.

Thorne, Sally, Sheryl Reimer Kirkham, and Katherine O'Flynn-Magee. 2004. 'The Analytic Challenge in Interpretive Description'. *International Journal of Qualitative Methods* 3 (1): 1–11. https://doi.org/10.1177/160940690400300101.

Timperio, Anna, Kylie Ball, Jo Salmon, Rebecca Roberts, Billie Giles-Corti, Dianne Simmons, Louise A. Baur, and David Crawford. 2006. 'Personal, Family, Social, and Environmental Correlates of Active Commuting to School'. *American Journal of Preventive Medicine* 30 (1): 45–51. https://doi.org/10.1016/j.amepre.2005.08.047.

Timperio, Anna, David Crawford, Amanda Telford, and Jo Salmon. 2004. 'Perceptions about the Local Neighborhood and Walking and Cycling among Children'. *Preventive Medicine* 38 (1): 39–47. https://doi.org/10.1016/j.ypmed.2003.09.026.

Titman, Wendy. 1994. *Special Places; Special People: The Hidden Curriculum of School Grounds*. WWF UK/Learning Through Landscapes. https://eric.ed.gov/?id=ED430384.

Todd, B., J. A. Barry, and S. Thommessen. 2017. 'Preferences for "Gender-Typed" Toys in Boys and Girls Aged 9 to 32 Months'. *Infant and Child Development* 26: e1986. https://doi.org/10.1002/icd.1986.

Transport for London. 2016. *Travel in London: Report 10.* Transport for London. http://content.tfl.gov.uk/travel-in-london-report-10.pdf.

Tranter, Paul Joseph. 2010. 'Speed Kills: The Complex Links Between Transport, Lack of Time and Urban Health'. *Journal of Urban Health* 87 (2): 155–66. https://doi.org/10.1007/s11524-009-9433-9.

Tranter, Paul, and Eric Pawson. 2001. 'Children's Access to Local Environments: A Case-Study of Christchurch, New Zealand'. *Local Environment* 6 (1): 27–48. https://doi.org/10.1080/13549830120024233.

Trapp, Georgina S. A., Billie Giles-Corti, Hayley E. Christian, Max Bulsara, Anna F. Timperio, Gavin R. McCormack, and Karen P. Villaneuva. 2012. 'Increasing Children's Physical Activity: Individual, Social, and Environmental Factors Associated with Walking to and from School'. *Health Education & Behavior: The Official Publication of the Society for Public Health Education* 39 (2): 172–82. https://doi.org/10.1177/1090198111423272.

Tucker, P., and J. Gilliland. 2007. 'The Effect of Season and Weather on Physical Activity: A Systematic Review'. *Public Health* 121 (12): 909–22. https://doi.org/10.1016/j.puhe.2007.04.009.

UK Government. 2020a. *The Health Protection (Coronavirus, Restrictions) (England) Regulations 2020.* Queen's Printer of Acts of Parliament. 2020.

https://www.legislation.gov.uk/uksi/2020/350/contents/made/data.htm.

UK Government. 2020b. *National Child Measurement Programme*. UK Government. https://www.gov.uk/government/collections/national-child-measurement-programme.

UK Government. 1996. *Education Act: section 444 (5)*. UK Government https://www.legislation.gov.uk/ukpga/1996/56/section/444/2009-09-01

UNICEF. 1990. *The United Nations Convention on the Rights of the Child.* UNICEF. https://www.unicef.org.uk/what-we-do/un-convention-child-rights/.

UNICEF. 2020. World of Influence: Understanding What Shapes Child Well-Being in Rich Countries. Innocenti Report Card 16. UNICEF. https://www.unicef-irc.org/publications/pdf/Report-Card-16-Worlds-of-Influence-child-wellbeing.pdf.

Urry, John. 2000. *Sociology Beyond Societies: Mobilities for the Twenty-First Century.* Psychology Press.

Urry, John. 2002. 'Mobility and Proximity'. *Sociology* 36 (2): 255–74. https://doi.org/10.1177/0038038502036002002.

Urry, John. 2007. *Mobilities*. Cambridge: Polity.

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

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.

Veitch, J., A. Carver, J. Salmon, G. Abbott, K. Ball, D. Crawford, V. Cleland, and A. Timperio. 2017. 'What Predicts Children's Active Transport and Independent Mobility in Disadvantaged Neighborhoods?' *Health & Place* 44 (March): 103–9. https://doi.org/10.1016/j.healthplace.2017.02.003.

Veitch, Jenny, Sarah Bagley, Kylie Ball, and Jo Salmon. 2006. 'Where Do Children Usually Play? A Qualitative Study of Parents' Perceptions of Influences on Children's Active Free-Play'. *Health & Place* 12 (4): 383–93. https://doi.org/10.1016/j.healthplace.2005.02.009.

Villanueva, Karen, Billie Giles-Corti, Max Bulsara, Gavin R. McCormack, Anna Timperio, Nick Middleton, Bridget Beesley, and Georgina Trapp. 2012. 'How Far Do Children Travel from Their Homes? Exploring Children's Activity Spaces in Their Neighborhood'. *Health & Place* 18 (2): 263–73. https://doi.org/10.1016/j.healthplace.2011.09.019.

Vindrola-Padros C, and B Vindrola-Padros. 'Quick and dirty? A systematic review of the use of rapid ethnographies in healthcare organisation and delivery.' *BMJ Quality & Safety* 2018; **27:** 321-330

Vlaar, Janae, Mariana Brussoni, Ian Janssen, and Louise C. Mâsse. 2019. '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 (17): 3129. https://doi.org/10.3390/ijerph16173129.

Van Vliet, Willem. 1983. 'Families in Apartment Buildings: Sad Storeys for Children?' *Environment and Behavior* 15 (2): 211–34. https://doi.org/10.1177/0013916583152005.

Voce, Adrian. 2015. *Policy for Play: Responding to Children's Forgotten Right*. Policy Press.

Wallis, Steven E. 2008. 'Emerging Order in CAS Theory: Mapping Some Perspectives'. Edited by Brian H. Rudall. *Kybernetes* 37 (7): 1016–29. https://doi.org/10.1108/03684920810884388.

Ward, Colin. 1978. The Child in the City. Pantheon Books.

Waterston, T, G Alperstein, and B Stewart. 2004. 'Social Capital: A Key Factor in Child Health Inequalities'. *Archives of Disease in Childhood* 89 (5): 456–59. https://doi.org/10.1136/adc.2002.024422.

Waygood, E. O. D., Margareta Friman, Lars E. Olsson, and Ayako Taniguchi. 2017. 'Transport and Child Well-Being: An Integrative Review'. *Travel Behaviour and Society* 9 (October): 32–49. https://doi.org/10.1016/j.tbs.2017.04.005.

Weller, Susie, and Irene Bruegel. 2009. 'Children's `Place' in the Development of Neighbourhood Social Capital'. *Urban Studies* 46 (3): 629–43. https://doi.org/10.1177/0042098008100998.

Wellman, Barry. 2001. 'Physical Place and Cyberplace: The Rise of Personalized Networking'. *International Journal of Urban and Regional Research* 25 (2): 227–52. https://doi.org/10.1111/1468-2427.00309.

Wells, Nancy M., and Gary W. Evans. 2003. 'Nearby Nature: A Buffer of Life Stress among Rural Children'. *Environment and Behavior* 35 (3): 311–30. https://doi.org/10.1177/0013916503035003001.

Wen, Ming, Louise C. Hawkley, and John T. Cacioppo. 2006. 'Objective and Perceived Neighborhood Environment, Individual SES and Psychosocial Factors, and Self-Rated Health: An Analysis of Older Adults in Cook County, Illinois'. *Social Science & Medicine* 63 (10): 2575–90. https://doi.org/10.1016/j.socscimed.2006.06.025.

Westman, Jessica, Maria Johansson, Lars E. Olsson, Fredrika Mårtensson, and Margareta Friman. 2013. 'Children's Affective Experience of Every-Day Travel'. *Journal of Transport Geography* 29 (May): 95–102. https://doi.org/10.1016/j.jtrangeo.2013.01.003.

Westman, Jessica, Lars E. Olsson, Tommy Gärling, and Margareta Friman. 2017. 'Children's Travel to School: Satisfaction, Current Mood, and Cognitive Performance'. *Transportation* 44 (6): 1365–82. https://doi.org/10.1007/s11116-016-9705-7. Wheeler, Benedict W., Ashley R. Cooper, Angie S. Page, and Russell Jago. 2010. 'Greenspace and Children's Physical Activity: A GPS/GIS Analysis of the PEACH Project'. *Preventive Medicine* 51 (2): 148–52. https://doi.org/10.1016/j.ypmed.2010.06.001.

Wheway, Rob, and Alison Millward. 1997. 'Child's Play: Facilitating Play on Housing Estates'. JRF. 1997. https://www.jrf.org.uk/report/childs-play-facilitating-play-housing-estates.

Whitzman, Carolyn, and Dana Mizrachi. 2012. 'Creating Child-Friendly High-Rise Environments: Beyond Wastelands and Glasshouses'. *Urban Policy and Research* 30 (3): 233–49. https://doi.org/10.1080/08111146.2012.663729.

Whitzman, Carolyn, Vivian Romero, Mitch Duncan, Carey Curtis, Paul Tranter, and Matthew Burke. 2010. 'Links between Children's Independent Mobility, Active Transport, Physical Activity and Obesity'. In *Preventing Childhood Obesity*, edited by Elizabeth Waters MPH Chair DPhil Jack Brockhoff, Boyd A. Swinburn MBChB Directoressor MD, FRACP, Jacob C. Seidellessor Director, and Ricardo Uauy MDessor, 105–12. Wiley-Blackwell. https://doi.org/10.1002/9781444318517.ch13.

WHO. 2020. 'Physical Activity'. WHO. https://www.who.int/news-room/fact-sheets/detail/physical-activity.

William Patten School. 2019. *Pupil Premium Grant 2019-2020*. William Patten School.

Wilson, Elizabeth J., Julian Marshall, Ryan Wilson, and Kevin J. Krizek. 2010. 'By Foot, Bus or Car: Children's School Travel and School Choice Policy'. *Environment and Planning A: Economy and Space* 42 (9): 2168–85. https://doi.org/10.1068/a435.

Wolcott, Harry F. 1994. *Transforming Qualitative Data: Description, Analysis, and Interpretation*. SAGE.

Wolcott, Harry F. 2008. Writing Up Qualitative Research. SAGE Publications.

Wolfe, Mary K., and Noreen C. McDonald. 2016. 'Association Between Neighborhood Social Environment and Children's Independent Mobility'. *Journal of Physical Activity and Health* 13 (9): 970–79. https://doi.org/10.1123/jpah.2015-0662.

Wong, Bonny Yee-Man, Guy Faulkner, and Ron Buliung. 2011. 'GIS Measured Environmental Correlates of Active School Transport: A Systematic Review of 14 Studies'. *The International Journal of Behavioral Nutrition and Physical Activity* 8 (May): 39. https://doi.org/10.1186/1479-5868-8-39.

Wood, J, D Bornat, and A Bicquelet-Lock. 2019. *Child Friendly Planning in the UK: A Review.* RTPI.

https://www.rtpi.org.uk/media/3608757/childfriendlyplanningintheukareview2019.pdf.

Wood, Jenny. 2015. 'Children and Planning: To What Extent Does the Scottish Town Planning System Facilitate the UN Convention on the Rights of the Child?' *Planning Practice & Research* 30 (2): 139–59.

https://doi.org/10.1080/02697459.2015.1014222.

Woolley, Helen. 2008. 'Watch This Space! Designing for Children's Play in Public Open Spaces'. *Geography Compass* 2 (2): 495–512. https://doi.org/10.1111/j.1749-8198.2008.00077.x.

Woolley, Helen E., and Elizabeth Griffin. 2015. 'Decreasing Experiences of Home Range, Outdoor Spaces, Activities and Companions: Changes across Three Generations in Sheffield in North England'. *Children's Geographies* 13 (6): 677–91. https://doi.org/10.1080/14733285.2014.952186.

YouGov. 2012. Unaccompanied Minor. YouGov.

https://yougov.co.uk/topics/politics/articles-reports/2012/05/10/unaccompanied-minor

Young, Lorraine, and Hazel Barrett. 2001. 'Adapting Visual Methods: Action Research with Kampala Street Children'. *Area* 33 (2): 141–52. https://doi.org/10.1111/1475-4762.00017.

Zeiher, H. 2003. 'Shaping Daily Life in Urban Environments'. In *Children in the City: Home, Neighbourhood and Community*. London: Routledge Falmer.

Zwerts, Enid, Georges Allaert, Davy Janssens, Geert Wets, and Frank Witlox. 2010. 'How Children View Their Travel Behaviour: A Case Study from Flanders (Belgium)'. *Journal of Transport Geography*, Special Section on Alternative Fuels and Vehicles, 18 (6): 702–10. https://doi.org/10.1016/j.jtrangeo.2009.10.002