# Everyday life and travel behaviour of families with children:

## A case study in outer London

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# Abstract

This PhD thesis explores the travel behaviour of families with children in a suburban area in outer London, and its potential to become more environmentally sustainable. The study employed a comprehensive everyday life perspective on family travel behaviour, looking at whole households and their everyday life, and at travel behaviour as embedded in it.

A survey with all parents of four primary schools in the study area was conducted, followed by in-depth qualitative interviews with 19 households with children, 12 of which were interviewed again after two years. The interviews were analysed using thematic narrative analysis.

The study finds that family everyday travel behaviour is mainly influenced by families' space-time constellations, which in turn are a result of the combined influences of physical parameters and social norms, e.g. about parenting, such as choosing the right school and after-school activities for children. For working parents, the mismatch of work and school hours is a challenge. Other main influencing factors are: strict car use limiting transport policies, interests of parents in physical activity and life skills for their children, and pressures of looking after young children on parents' mental health. Notable secondary, contributing factors are material and emotional experiences while travelling.

All factors work together in the continuous process of the everyday life co-ordination of families, which is characterised by relationality, individualisation and fragmentation. Families use coping strategies to optimise the pursuit of everyday activities such as going to work, childcare, school or after-school activities, which meet family needs. The car is the mode of transport that is used for most journeys, irrespective of family background and needs. A dominant car culture was found to be engrained in the study area. Through investigating how family travel behaviour actually works in the context of everyday life, more grounded conclusions are drawn on how it could become more environmentally sustainable. Overall, this study suggests that drastic societal changes are required across several levels and sectors of community and government.

# Foreword

Before I started my PhD studies, I had worked in an environmental consultancy and an international NGO, promoting sustainable travel behaviour in urban areas. However, despite the implementation of policies and measures to this end, e.g. the provision of public transport and cycling infrastructure, and awareness raising campaigns, the car still remains the main mode of transport in many towns and cities.

Researching for this PhD thesis, I set out to learn more about why sustainable travel behaviour was so difficult to achieve. I was interested in a micro-perspective: what do people actually do in their everyday lives, and why do so many mainly get around by car, even in places where cycling and walking, together with the use of public transport, could replace many car journeys, especially bearing in mind that surveys often show that people wish to walk and cycle more.

With research continuously highlighting the negative impacts of too much car use, especially on children, including the risk of obesity, lung damage through air pollution, accidents through traffic around schools and other places, reduction of independent mobility, and not least its contribution to climate change, I decided to focus my study on families with children, in an outer London suburb with good public transport accessibility, i.e. where there is realistic opportunity to get around without a car. During the period of researching for my PhD, I became a mother myself, and experienced the complexities of family everyday life co-ordination and daily travel, first hand.

My findings show that it is not as easy for people to just hop on a bike for any journey in cycling distance, or just drive less, as it might look in theory. People's travel behaviours are inextricably linked with their everyday lives and the motivations for the activities they, their fellow household members and others, take part in. Family travel behaviour is special, due to influencing factors such as school and after-school activity choices, as well as children's individual abilities according to their developmental stages. All of the families I studied stated that they would like to walk and cycle more and would prefer to be less car-dependent. My study concluded that

in order to promote sustainable travel behaviour among families more effectively, measures need to acknowledge and affect families' wider everyday lives.

I hope that my thesis is interesting to read, and that it, in some way, could lead to more sustainable travel behaviour of families in the future.

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# 1 Introduction

This thesis investigates the everyday travel behaviour of families with children in outer London suburban areas, and how it could become more environmentally sustainable. The following sections lay out the problems associated with everyday transport as the rationale for this study, then present the main objectives and research questions, before concluding with an overview of chapters.

## 1.1 Transport and climate change

Transport plays an important role in society. It has positive social and economic impacts, however, it is also a major contributor to climate change, among other environmental, as well as social and economic problems. In 2013, transport, after energy supply, was the second largest contributor to UK greenhouse gas emissions[1], with an emissions share of 21 per cent (Department of Energy and Climate Change, 2015:8). Most of the greenhouse gas emissions from the transport sector are made up of $CO_2$ emissions. In 2013, 97 per cent of the UK domestic transport $CO_2$ emissions were caused by surface transport, of which 96 per cent were caused by road transport. Of the $CO_2$ emissions of road transport, 58 per cent were caused by car use (National Atmospheric Emissions Inventory (NAEI), 2014, in Committee on Climate Change, 2014:245-246).

In order to mitigate climate change to avoid severe negative impacts, it is necessary to significantly reduce greenhouse gas emissions globally and across all sectors within the coming years and by 2050 at the latest. Countries which committed to the most recent international climate change agreement, i.e. the Paris Agreement in 2015, agreed to the need to limit the global temperature increase from pre-industrial levels to 1.5 degrees Celsius. Furthermore, the Paris Agreement implies the need for net zero net emissions[2] globally from 2050 onwards (Committee on Climate Change,

[1] Greenhouse gas emissions in the referenced report were defined as: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulphur hexafluoride and nitrogen trifluoride, i.e. the basket of greenhouse gases covered by the Kyoto Protocol (Department of Energy and Climate Change, 2015:3).

[2] Zero net emissions is defined in the Paris Agreement as balancing "anthropogenic emissions by sources and removals by sinks of greenhouse gases in the second half of this century" (i.e. a 100% reduction in net global emissions by 2050-2100) (Committee on Climate Change, 2016:18).

2016:18). However, the UK's current legal target of reducing greenhouse gas emissions by 80 per cent between 1990 and 2050, already falls short of the Paris target. Even if current global governmental commitments were fulfilled, the global temperature change would still amount to over two degrees Celsius, leading to potentially severe impacts (Warren et al., 2016, in ASC, 2016:25-26).

A drastic reduction in emissions from transport is therefore urgent (Department of Energy and Climate Change, 2014). UK transport sector emissions need to be reduced by 44 per cent between 2015 and 2030 (Committee on Climate Change, 2017:20), which can most likely only be achieved by reductions in every type of motorised transport, i.e. public, commercial and private transport. The implication is that car use within the general population will have to be reduced.

### 1.2 The lack of change in travel behaviour

Greenhouse gas emission reductions from private transport can be achieved through changes in travel behaviour, and mainly by a reduction of car use. This includes replacing car use with walking, cycling or use of public transport, reducing the frequency or length of car journeys, replacing single car journeys by sharing lifts, and using low/zero emission vehicles (which use low or no emission fuels or are particularly fuel efficient).

A switch to electric vehicles is not an easy solution to the problems caused by transport. For vehicle technology, lifecycle emissions need to be considered. Electric vehicles currently only offer small emissions savings (European Parliament, 2018). However, even if electric car technology as well as the power sector became much 'greener', and greenhouse gas emission targets could be achieved by the replacement of conventional cars with electric cars, other societal problems, such as road congestion, some health risks and potentially the lack of equity of access to transport would remain. Therefore, a large reduction in car use of any kind, and substantial increases in walking, cycling and use of public transport will be necessary to achieve emissions reduction targets, as well as more sustainable transport and sustainable development in general.

Policy measures that can be used to promote more sustainable transport include planning (e.g. the development of a mix of housing and other uses, and amenities

with good accessibility by public transport), infrastructure provision (e.g. cycle paths and cycle parking), regulatory measures (e.g. car use and parking restrictions), economic incentives (e.g. subsidised public transport: in the UK public transport is free for children), as well as 'softer' measures to encourage people to voluntarily change their behaviour, such as social marketing and awareness campaigns (e.g. school travel plans that encourage walking and cycling to school). The latter type of policies has been used most by UK policymakers in recent years to increase environmentally sustainable behaviours in all areas, including transport (e.g. House of Lords Science and Technology Committee, 2011).

Notably, all 'soft' policy approaches are based on the assumption that for travel behaviour to change, individuals have to act by themselves and change their behaviour more or less voluntarily, i.e. policies appeal to people's attitudes or remove the immediate barriers to individuals' behaviour change towards more sustainable options. Such a view however neglects the significance of wider social and economic environments to behaviour and potential behaviour change, including the relevance of collective versus individual initiatives (Barr and Prillwitz, 2014:4-5). The travel behaviour of families with children, including all family members, has not been considered consistently in policy, for example.

In the UK, while single measures have shown some effect towards more sustainable travel behaviour, policies have overall been found ineffective to increase any of the low shares of cycling and walking that have persisted for some time (Cabinet Office, 2009, in Watson, 2012). As Shaw and Docherty (2014:112-113) point out, despite a cross-party consensus on supporting sustainable modes of transport while limiting new road capacity, and despite changing governments, Britain's transport system has not become more sustainable in the period from 1997 to 2013.

Achieving change in transport demand has proven difficult, partly due to low levels of investment, however also due to the positive social narratives that were established during the years of 'predict and provide', of the private car as great liberator for people, and of the 'car owning economy'. These narratives evidently came with their own negative social effects such polarisation of car owners and others (Shaw and Docherty, 2011:8-13).

### 1.3 Families and everyday travel

Families with children are a special group when it comes to travel. Family travel behaviour is mutual, that is, it is the result of the shared everyday life co-ordination of work, childcare, school and other activities. Smaller children must be accompanied, which presents parents with challenges such as slower travel speed, less flexibility, and the need to use equipment such as prams and child car seats. These characteristics of family travel can lead to extensive car use, and act as a barrier to the uptake of more sustainable modes of transport.

At the same time, active and sustainable travel behaviour can play an important role in children's health and development, e.g. can contribute to the prevention of obesity, as sustainable transport modes tend to be less sedentary than travelling by car (Voss and Sandercock, 2010). Furthermore, some commentators suggest that if children learn about and practice sustainable transport early, there is a chance that habits are formed that might last into adulthood (Trost, Saunders and Ward, 2002; Kjønniksen, Torsheim and Wold, 2008).

In 2011, the Department for Transport published a study that presented a segmentation of UK residents' travel behaviour into nine groups. It identified 'educated, suburban families' as one of two target groups with the largest potential to change their travel behaviour to become more environmentally sustainable. This group accounts for 17 per cent of the UK population. These families have a higher than average income and family members are well educated. They travel much more than the general population and have high car use. However, they are also more conscious about environmental and health concerns, are positive towards cycling, and are more likely to state that they could live without a car (Thornton et al., 2011:13-14). The authors of the report suggest that travel behaviour change policies should focus on 'educated suburban families' and include information provision, economic incentives and new infrastructure to encourage the use of public transport, walking, cycling, car sharing schemes, as well as low/zero emission cars (Thornton et al., 2011:92).

However, travel behaviour among most of the UK population, including 'educated, suburban families' has remained stubbornly environmentally unsustainable over previous decades. In Greater London, although the share of journeys made by car has

decreased year on year (from 49 per cent in 1996), it still remained relatively high at 36 per cent in 2016. And despite policies and measures, the share of cycling only went up from 1 to 2 per cent in the same period (Transport for London, 2017:28).

The car is the main mode of transport for most families in suburbs. However, some suburbs, including many of those in outer London, are well served by public transport, and with amenities often in walking or cycling distance to homes. There is, at least in the most accessible suburbs, a large potential for more sustainable travel behaviour among this group.

### 1.4 Using an everyday life perspective to research family travel behaviour

The sociologist Elizabeth Shove has criticised the prevailing policy and sustainable behaviour research paradigm of 'ABC – attitudes, behaviour and choice' - namely, one that defines unsustainable behaviour as a problem of individual agency and factors influencing it. She argues that policy should shift away from persuading individuals to change towards more sustainable behaviour. Instead, she posits that a radical societal transformation is required in which, "the rules of the game are eroded; in which the status quo is called into question; and in which more sustainable regimes of technologies, routines, forms of know-how, conventions, markets, and expectations take hold across all domains of daily life" (Shove, 2010:1278).

There has been much research on travel behaviour, however the body of this research is still inconclusive on why people, and especially families with children, travel as they do, and on how their travel behaviour could become more environmentally sustainable. Travel behaviour must be seen in its entirety, i.e. considering all journeys, at different times, to all destinations. The perspective must go beyond individuals; family members' individual travel behaviour is related, and therefore needs to be studied in unison. Children are special as they influence family travel behaviour through their specific needs and ever-changing abilities linked to their physical and cognitive development. More needs to be understood about the synergistic effect of factors influencing travel behaviour. This requires not only focusing on attitudes and agency of individuals but of the interplay with other family members and the physical, social and economic contexts of their lives.

This study therefore argues that key to the understanding of family travel behaviour is an everyday life perspective, i.e. researching travel behaviour as embedded in its context of the everyday: what do family members think, feel and do? How do they co-ordinate employment, housework, childcare, school and leisure among each other? Where is travel behaviour located in, and how is it affected by, families' everyday life as set in its societal context? How does everyday life, and everyday travel, evolve over time, and how can travel behaviour change towards more environmentally sustainable patterns?

This thesis presents a better understanding of the nature of family travel behaviour and how more environmentally sustainable travel could be supported. It considers all factors influencing travel behaviour and the individual travel behaviour of all family members, including children, in unison. Its starting point is that family travel behaviour is influenced by their wider everyday life, including the activities they take part in, the motivations for those, as well the daily life co-ordination among family members. The focus is families living in in an outer London suburb with arguably good public transport accessibility and therefore great potential for sustainable travel and from which lessons could be learned for similar areas.

### 1.5 Research questions

The main objectives of this research are:

1. To understand factors influencing travel behaviour among families using an everyday life perspective.
2. To identify how travel behaviour among families could change to become more environmentally sustainable.

Questions guiding the research are:

1. What are the characteristics of the travel behaviour of families in outer London?
2. What underlying factors influence travel behaviour of families in outer London?
3. How can travel behaviour among families in outer London become more environmentally sustainable?

4. How can an everyday life perspective enrich our understanding of travel behaviour?

### 1.6 Overview of chapters

**Chapter 1** (Introduction) This chapter presented the background to the research topic, i.e. the problems associated with transport, the role of family everyday travel behaviour within it, and the need for a better understanding of it in order to learn how it can become more environmentally sustainable. It concludes with the research objectives and guiding research questions.

**Chapter 2** (Family travel behaviour: Existing knowledge and research approaches) provides a review of the literature in the field broadly defined as transport studies. Some of the relevant literature comes from the fields of planning, human geography, sociology, social psychology as well as public health. The chapter starts with an overview of the characteristics of travel behaviour specific to families, before presenting a history of research approaches in the field and then focusses on the existing body of knowledge on travel behaviour. This knowledge forms the background to a more recent acknowledgment among researchers that new approaches are needed to better understand family travel behaviour, which leads to an outline of some of the theories and studies which are potentially useful in inspiring such approaches. The chapter concludes with a summary of the literature review, the research gap that this study aims to fill, as well as the conceptual framework which served as the starting point for the empirical research part of the study.

**Chapter 3** (Methodology) details the methodology used. It describes the theoretical lens used, the research strategy and design, as well as the main methods chosen for the empirical work, including data analysis techniques used and the analysis process. Limitations of methods are outlined, as well as the positionality of the researcher. Ethical and research quality considerations of the investigation are discussed.

**Chapter 4** (Setting the scene - Study area and sample characteristics) provides information about the study area, the sample population of the questionnaire survey, and the survey respondents. It then presents socio-economic characteristics and travel behaviour of the interviewed families. This includes an estimate of the level of environmental sustainability of family travel behaviours.

**Chapter 5** (Interview findings – Factors influencing travel behaviour) is the first of two chapters (together with Chapter 6) presenting the findings of the analysis of household interviews. It explains the main factors that were found to influence family travel behaviour, as well as secondary, contributing factors, including some of their underlying aspects.

**Chapter 6** (Interview findings – Family travel behaviour and everyday life) is the second chapter on the interview findings, laying out how the factors influencing family travel behaviour interact as part of families' wider everyday lives. It includes a discussion of the characteristics of children's travel, the impact of relationality, as well as everyday life co-ordination to satisfy family needs and coping strategies that families employ to overcome everyday life challenges. Finally, the impacts of changes in families' everyday lives on their travel behaviour, and the potential for changes towards more environmentally sustainable travel behaviour are presented.

**Chapter 7** (Discussion of findings) puts this study's findings into the context of existing research in the field, pointing out commonalities and differences, including any novel insights that were gained from this study. An updated conceptual framework is discussed.

**Chapter 8** (Conclusions and reflections) presents conclusions in the light of the original four research questions, and the research findings are used to comment on the London Mayor's Transport Strategy 2018-37. Furthermore, the chapter includes reflections on the research methodology, an outlook on further research, and the original contribution of this thesis to the research field.

**Conclusion**

Transport, especially private car use, is a major global contributor to climate change. A pivotal report commissioned by the UK Department of Transport identified 'educated suburban families' as one of the main target groups with large potential for behaviour change towards more environmentally sustainable travel behaviour (Thornton et al., 2011). However, current travel behaviour of this group is still very unsustainable, despite many policies and measures to achieve the opposite.

A better understanding of the factors influencing suburban families' travel behaviour – as embedded in their everyday lives – is required in order to identify more effective

ways of supporting more sustainable travel patterns and reducing greenhouse gas emissions. The potential for more sustainable travel behaviour is assumed to be larger in suburbs well served by public transport, which often applies to outer London areas. This thesis therefore investigates the travel behaviour of families with children in outer London, using an everyday life perspective.

In order to establish a basis for this study, as well as a research approach to better understand the study topic, the existing knowledge about family everyday lives and travel behaviour needs to be examined. The following chapter is a review of the relevant literature.

# 2 Family travel behaviour: Existing knowledge and research approaches

In order to create the basis for a study which can contribute with new, original knowledge about why families mainly travel by car and do not use more sustainable modes of transport to a greater extent, this chapter presents a review of the relevant existing literature.

The characteristics of travel behaviour that are specific to families are noted, before the existing body of knowledge on family travel behaviour is presented. The literature review then lays out the more recent acknowledgment among researchers in the field that new approaches are needed to better understand family travel behaviour. The literature review concludes with an outline of theories and studies which are potentially useful in inspiring such approaches. Finally the research gap and conceptual framework are presented.

## 2.1 Everyday travel of families with children

Family can be defined in many different ways, including “the basic unit in society traditionally consisting of two parents rearing their children” and “any of various social units differing from but regarded as equivalent to the traditional family (e.g. single parent family)” (Merriam-Webster Dictionary, n.d.). Families can consist of parents and their child(ren). There are also single parent families, or households with a parent and their partner (who isn’t a parent of the children in the household), which can also mean that children live in two households alternately, often joined by step or half siblings. Some children don’t live with a parent but another relative or with a carer.

Family definitions can also meaningfully extend to other family members such as grandparents, uncles and aunts and their families, as well as other close relationships such as friends, as these might all play a role in the everyday life of families. Indeed, it can be difficult to talk about families, as there is so much variety among them (Morgan, 2011:3). Smart (2007), while acknowledging the significance of the term ‘family’, and, in agreement with Morgan (2016, in Smart, 2007:188) not seeing it as obsolete, however advocated a wider perspective on the ‘personal life’, which

"incorporates all sorts of families, all sorts of relationships and intimacies, diverse sexualities, friendships and acquaintanceships", not giving priority to biological kinship or married couple families (Smart, 2007:188). Morgan also proposed a definition of family which emphasises the 'doing' of family 'practices', rather than focus on institutional criteria of definition (Morgan, 2011:8).

For this study, the most relevant aspect of families related to travel behaviour was assumed to be the existence of children in the family households, distinguishing family travel behaviour from that of households consisting of only adults. The definition of 'child' as a person below the age of 18 (as defined in the UK Children Act 1989) was used. All children were included in the study, however, the methodology's design led to a focus on younger children, i.e. those going to primary school, and being between 4 and 11 years old.

Children need to be cared for and often accompanied to destinations specific to the child, e.g. school or nursery, in the UK usually at least until they are 11 years old and start secondary school. Many children at that age and older however, are still routinely accompanied by an adult when they travel, either for safety or practical reasons (Shaw et al., with Hillman, 2013). Children, depending on age, also have different cognitive and physical abilities when it comes to travelling. Furthermore, defining family in terms of a household with children also gives a clear geographical location of where a family lives, which is an essential component when studying travel behaviour.

Therefore, for the purpose of this study, 'family' was defined as any private household with at least one child. Children living in several households regularly, or individuals who are involved in the daily organisation of a family, such as childminders, friends, or relatives, living in different places, can have an influence on the family's everyday travel. These relationships were acknowledged, however, the focus for this study was on travel behaviour of the household in which the interviewed parent lived most of the time.

A central factor influencing how independently, as well as the amount, children travel, is the increase in organised activities for children. Zeiher (2001, in Hjorthol and Fyhri, 2009:217) expressed the changes that children's activities have undergone during the last few decades towards more organised leisure activities as

'insularisation'. Children are taken from island to island throughout the day, e.g. from home to school and on to after-school activities. The landscape around those islands is considered impractical, inappropriate or unsafe for children, which is why they are accompanied through them, often transported by car. During the period from around 1990 until 2010, children of all ages and across a number of European countries have travelled less and less independently and have increasingly been driven in cars (Fyhri et al., 2011).

Secondly, children go through a number of physical and mental developmental stages, which affect everyday travel. Children can be slower, can't reach as far, can be impatient and tired or unaware of surrounding traffic. Travelling with more than one child can be more demanding still. What might be considered 'doable' for adults by themselves, in terms of length, duration and modes of transport used, can be impossible when travelling with children (Pooley et al., 2011).

A range of equipment can be used for travelling during each developmental stage. Babies and toddlers up until around 3 years of age are often transported in a pram, buggy or sling, or in an infant car seat. Prams and buggies can go on public transport, however, many train stations do not offer step-free access to their platforms and on many buses the maximum number of prams allowed is restricted (London Assembly, 2020). A 'buggy board' attached to a pram or buggy can be useful when travelling with two young children, but can also be heavy to push. Some adults travel with a small child in a buggy and another one (or several other children) walking, cycling or scooting alongside.

Bicycle seats can carry babies and children until they are too heavy. One or two toddlers can go in a bike trailer. Furthermore, there are cargo bikes that can be used to transport up to four children, however cargo bikes are large and heavy and can be difficult to manoeuvre and park. Some cargo bikes come with electrically assisted power (Bike Radar, 2020).

Some children go on scooters from around two years onwards, which means that they can go further and faster, compared to walking. Before children can cycle on a pedal bike at around four years old, they can go on a balance bike. Scooters and balance bikes can sometimes be taken on buses and trains, however, adults might find this impractical, depending on what else they have to carry.

Cycling on roads is often deemed unsafe, which is why many parents only allow their children to cycle in parks, on cycle tracks or on pavements. As keeping an eye on a child cycling on the pavement, while cycling alongside on the road is difficult, and cycling on the pavement generally is illegal, many parents effectively don't allow children to cycle for everyday journeys at all (Sustrans, 2020). Bicycles are usually not allowed on public transport, or only with restrictions (Transport for London, n.d., b). Bicycles can be transported by car; however, with the exception of the smallest children's bikes and folding bikes only, this necessitates a special bike rack for most cars, if several bicycles need to be transported (Cycling with the kids, n.d.).

There can also be periods when it is harder for families to cycle together, or only possible if using special equipment, e.g. a 'tag along' attachment on an adult bike when a child is too heavy for a bike seat, but not good enough at cycling independently yet to reach useful destinations. Cycling also requires access to a range of equipment such as helmets in different sizes, weather-proof clothing (which is also necessary when walking), lights, locks and potentially baskets or panniers (Bike Radar, 2020). When travel with children is mainly car-based, the only equipment needed are child car seats, with some models covering all ages and sizes of children. Prams, buggies, scooters, balance bikes and small children's bikes can easily be taken in the rear of the car for use at the destination. In this respect, travelling by car can be considered far less difficult than using any other mode of transport.

### 2.2 Children's destinations

Travel behaviour is to a large extent influenced by the choice of destinations families travel to. The main child-related travel destinations are childcare, education and after-school activities, which the following two sub-sections present in more detail, emphasising the large variety of options in terms of locations and timings, leading to widely differing itineraries among families, according to availability of and preferences for destinations, as well as number and ages of children.

#### Childcare and school

Childcare is a typical destination of everyday travel for children. In 2014-15, 79 per cent of all parents in England used some form of childcare, with 66 per cent using formal childcare, which usually parents have to pay for (Department for Education,

2016:46). Formal childcare services exist in most places for children from birth onwards. These include nannies working at families' homes, childminders looking after a small number of children at the childminder's home, as well as public, private or community nurseries. Many childcare providers offer flexible full or part day care in the period from early mornings until around 6pm nearly all year for example, while others only operate during restricted hours in the day and during school term times, typically school nurseries.

In the UK, children can start primary school in the autumn after they turn four years old. Especially in more densely populated areas, parents often have a state primary school within walking distance (e.g. within a 15 minutes' walk). Since the 1988 Education Reform Act, parents have been able to freely choose their child's primary school. However, schools or the local education authority use admissions criteria, i.e. prioritise applications according to for example social or medical needs, or sibling rights. Other applications are then typically allocated according to distance to the school. At the same time, with the publication of school performance data such as in school league tables and Ofsted reports, parents have become more conscious of the performance of schools, which has led to a polarisation between perceived 'good' and 'bad' schools. Furthermore, parents with enough resources to choose where to buy or rent a property, are able to move closer to popular schools (where property often is more expensive), which contributes to further restricting the choice of schools for other parents who are not able to do so (Butler and Hamnett, 2011:160-163).

In practice, parents' choice of school, due to distance criteria, is often restricted to the nearest school and any other schools that have wider areas of intake, either due to being larger, not overly popular, or due to their location near larger open spaces. If parents perceive any one of these schools as better than their nearest school, it can have a significant impact on the family's travel behaviour, especially when the chosen school is then not within walking distance of the home. Distances from families' homes to other than state schools, such as independent or, often to a lesser extent, faith based schools, are usually relatively long, as these schools often recruit from a larger geographical area to fill their places. This again makes it more likely for children to be driven to school.

The school day is shorter than the daily working hours for most employees, especially after including commuting times. As 76 per cent of all men and 67 per cent of all women with dependent children in the UK work (data from 2013; Office for National Statistics, 2013), many parents, especially those with primary age children have to have childcare before and/or after school. Depending on the offer available at the school, parents can use extended care such as breakfast clubs and after-school activities or clubs, for a fee. There are also external activity providers, e.g. for specific classes, which can be combined with extended childcare by providers who might also pick children up from classes. Alternatively, parents can hire a nanny or childminder for any childcare needs.

Childcare costs can be significant. In the UK currently all children between 3 and 5 (and in special cases from 2) years old are granted 15 hours a week of free childcare during school term times at nurseries and other registered providers. Still, with wide ranging employment of mothers and few employers allowing flexible work arrangements, e.g. part-time positions or working hours fitting around school and school holidays (Stewart and Bivand, 2016), most parents, at least for some years, have significant costs of childcare to bear.

In 2014-15, 53 per cent of parents in England found the affordability of the childcare they used very or fairly good, while 22 per cent found affordability fairly to very poor, rising to 33 per cent among working single parents (Department for Education, 2016:140-141). Furthermore, for many families on lower incomes, childcare costs outweigh their potential to earn from work, which often leads to parents not working at all. In order to have what people commonly consider a minimum living standard including paid for childcare, a couple with two children has to have an annual combined income of nearly £38,000 and a single parent with one child needs to earn nearly £28,000 a year (Davis et al., 2016). Furthermore, pay during maternity or paternity leave is usually lower than the full salary. Childcare cost can therefore be a major financial burden for families and while childcare services might be available covering almost any working hours, parents often try to minimise the use of those for cost reasons, which means that they are under time-pressure, which then often leads to choosing to drive.

**Classes and after-school activities**

As mentioned previously, childhood today is characterised by formally organised activities. Further to school, nursery or other childcare, children often take part in classes and other activities. Parents, especially in urban or suburban areas with large family populations, can choose from a wide variety of such activities, with sports and music classes being most popular. Classes can take place before or after school, at school or at other venues. After-school activities are not necessarily located close to schools nor particularly accessible by public transport and can therefore be a major generator of travel in general and car journeys in particular (e.g. Sersli et al., 2020).

Data on children's travel behaviour, and especially on travel to after-school activities, is rare. Hjorthol and Fyhri (2009) in their study of children aged 6 to 12 years old in Norway found that the vast majority of children (over 80 per cent) took part in after-school activities. Only between 27 and 44 per cent of all attended activities were within what they considered walking distance (two kilometres), and therefore only between 25 and 53 per cent of all journeys to after-school activities were reached on foot or by bicycle. This is much lower than the 60 per cent share of journeys to school which the study found to be made on foot or by bicycle. Whether parents have more or less time pressure due to working hours, was found insignificant for the mode of transport chosen, i.e. most parents used the car to travel to after-school activities regardless (Hjorthol and Fyhri, 2009:214).

Detailed statistics of the mode of transport to after-school activities in the UK were not available at the time of study. The use of the car to travel to school increased between 1995 and 2015, from around 40 to 46 per cent for primary school children, and from 21 to 26 per cent for secondary school children up until 17 years old, and with a stronger increase in both age groups from around 2010 (Department for Transport, 2015).

**Conclusion**

This section showed that family travel behaviour is special because it includes the travel behaviour and interaction of several individuals, and because of the influence of children's ever changing physical and cognitive abilities and their lack of independence. It is also clearly influenced by families' wider everyday lives. This

includes the co-ordination of work, childcare, school and activities, influencing all family members and in the context of a family's economic situation. According to preferences of school and after-school activity choices and the mismatch of work and school hours, parents often have to co-ordinate large amounts of associated travel for their children. This can be extensive, when several children with different school timetables and after-school activities are involved (Sersli et al., 2020; Hamilton et al., 2005, in Jain, Line and Lyons, 2011:2), and often leads to parents using the car. Furthermore, the relatively high cost of childcare contributes to parents generally rushing to travel between home, work, childcare, school and after-school activities to avoid having to use additional childcare, which further adds to the likelihood of families driving.

Overall, travelling with children is most often more complicated than travelling as an individual adult or among adults. However, these specific characteristics of family everyday travel have usually not been acknowledged in travel behaviour research. The following section outlines previous approaches to travel behaviour research and where available, research on family travel behaviour.

### 2.3 Travel behaviour research: approaches and theories

#### Travel behaviour

Travel behaviour is a term which has been defined in many different ways, e.g. by researchers and policy makers (Axhausen, 2007). A broad definition of travel behaviour is "the physical movement of persons outside their reference locations for any purpose." (Axhausen, 2007:165). This includes the ways that people travel and the characteristics of this travel, such as mode choice (e.g. Axhausen, 2007; Anable, 2005), as well as destination choice, e.g. as related to the activities that generate travel (e.g. Axhausen, 2007). Travel behaviour can be more or less environmentally sustainable.

The concept of sustainable development was established by the Brundtland report in 1987, and is defined as "development that meets the needs of the present without compromising the ability of future generations to meet their own needs." (World Commission of Environment and Development, 1987:16). Inspired by this, a number of definitions of sustainable transport have been used. Most of these are relatively

broad (Rahman and Van Grol, 2005), e.g. defining sustainable transport as transport that contributes to the environmental, social and economic sustainability of a society.

A more concrete definition was drawn up by the European Conference of Ministers of Transport (ECMT) in 2004. According to it, socially sustainable transport ensures basic access for people, companies and society to transport, to meet their development needs, is healthy for humans and ecosystems, and increases equity among current and between successive generations. Economically sustainable transport is affordable, fair and efficient, offers a choice of transport modes and promotes a competitive economy and balanced regional development. Environmentally sustainable transport operates within sustainable limits of emissions, noise, waste and use of renewable resources. It ensures that non-renewable resources are replaced through the development of substitutes. Furthermore sustainable transport systems have a minimal impact on land use (European Conference of Ministers of Transport, 2004).

For this study of travel behaviour of families with children, transport modes, destination choices, the distances travelled, as well as when and how often people travel, were looked at (however not exactly quantified). However, the focus was most importantly on travel behaviour as part of the wider everyday lives of families.

While family members might also take part in business and holiday travel, these were not intentionally included in the research, however were nevertheless acknowledged, if deemed relevant. This was due to the limited resources available for this study, and because arguably most of the environmental impacts of private transport come from everyday travel.

In order to gauge the sustainability of travel behaviour, the environmental (rather than social or economic) impacts of transport were focussed on in this study. This was due to the fact that the most pressing negative impact of transport is its contribution to climate change. Factors contributing to car use were considered especially relevant. When a car was used, its environmental impact was higher with an increased volume of travel, i.e. either due to the number or length of journeys. A high volume of travel itself also often led to the car being the most practical, or only viable, mode of transport to cover these travel needs in the time available. Therefore, environmentally sustainable travel behaviour was for this study defined as travel

behaviour involving the least car use possible, roughly taking into account the volume of greenhouse gas emissions of vehicles used, e.g. looking at vehicle size (as reported by interviewees).

**Approaches to travel behaviour research**

Traditionally travel behaviour was researched from the perspective of disciplines such as civil engineering, especially during the 1960s and 70s. Methods used then were mainly quantitative, for example measuring traffic flows, distances, or frequency of travel. Large amounts of aggregated data were used to build models to predict travel demand and behaviour. Research did not look at specific characteristics of family travel behaviour.

A different approach was developed from the late 1960s by Torsten Hägerstrand (Hägerstrand, 1970). His model of time geography looked at individuals and at their potential for daily travel as constrained by time and space. These constraints are influenced by contextual factors such as geography, accessibility, availability of destinations and people to meet within certain time frames, as well as rules and regulations. A person is only realistically able to travel a limited distance within the time windows that are available each day (Hägerstrand, 1970). This distance has often been found to be longer when travelling by car than by other modes of transport, due to the relative speed of car travel (Lenntorp, 1976). Travel behaviour, including travel mode choice, is therefore influenced by time geography. However, time geography as a model to explain how travel behaviour works is limited. While it presents what is possible at all (i.e. the journeys that can be undertaken within the given space-time constraints), it doesn't explain how people choose from any variety of travel and transport mode options that exist within these constraints (Lucas, 2011). Again, family travel behaviour was not specifically considered.

From the 1970s onwards, the focus of travel behaviour research moved towards individual decision-making as the main determinant for travel behaviour. Research started to apply economic utility theory that assumes that individuals rationally assess different behaviour options according to their utility and then choose the most useful one. Such theory can predict behaviour to some extent, however it has been criticised for being too simplistic, not taking into account that people might use a number of different rules for different decisions, may learn over time and the extent

to which they are influenced by 'automatic' habitual behaviour. Critics have also pointed out that choices are rarely made purely on a rational basis as people might not have a complete knowledge about options, behaviours are dependent on other behaviours, and different choices are made in different contexts. Utility theory also doesn't take into account emotional, symbolic or any other influential factors (Lucas, 2011:10-11). It is focussed on the individual as the unit of behaviour and fails to consider that decisions may be contingent on families as a whole unit (Clifton and Handy, 2001:12).

From the 1980s onwards, economic utility theories were amended and new theories emerged, that aimed to address the weaknesses of economic utility theory and offer wider perspectives that included broader factors that influence travel behaviour. The rise in the use of behavioural theory within the field of the social sciences around the beginning of the 1990s was partly due to the increase in research that considered the pressing environmental impacts of travel behaviour in the context of climate change (Shove, 2010).

However, the focus of research has often been on individuals, rather than families, and specific journeys, e.g. to work or school. For example, transport mode choice was studied through the lens of social psychology using generalised models of human behaviour. The Theory of Planned Behaviour (Ajzen, 1991) is one of the most widely used theories in this context. According to this theory an individual's attitudes, subjective norms and perceived behavioural control leads to a behavioural intention that determines whether a given behaviour is performed. Such socio-psychological theories, however, are still based on individual rational choice, and while considered an improvement on previous models, have been criticised for being too reductive to predict behaviour and to neither be able to acknowledge more contextual factors nor dynamic processes (Lucas, 2011:20).

Before turning to recent research and research approaches which might be more useful for a better understanding of family travel behaviour, the following sections present the existing research on factors influencing travel behaviour and, where available, includes any research on factors influencing family travel behaviour.

## 2.4 Factors influencing travel behaviour

In order to be able to build on the existing knowledge of how travel behaviour works by using a different research approach, the following sub-sections summarise the factors that have been found influential for travel behaviour in general, and for families with children in particular, where such research exists. Factors include individual (e.g. attitudes and emotions) and social (e.g. identity and social norms), as well as contextual factors (e.g. economic and physical context).

### 2.4.1 Individual factors influencing travel behaviour

As outlined in the previous section, traditionally, research on travel behaviour employed quantitative approaches. These mainly focussed on the impact of a few isolated contextual factors such as household income, or the physical relationship between the home location and activities travelled to. For example, it was assumed that people who have a higher income, and those who live in areas that are less accessible by public transport, walking or cycling, use the car more. This is applicable in many cases, however research on these factors has remained inconclusive when it comes to explaining travel behaviour (e.g. Handy, 2005). As a response to this, several researchers have looked more at the 'softer' factors influencing travel behaviour, i.e. individual and social factors.

Studies found a multitude of individual factors that play a role in travel behaviour, some more influential than others. Murtagh, Gatersleben and Uzzell (2010:5) point to a number of studies which suggest that psychological individual factors such as habit (Gärling and Axhausen, 2003; Verplanken et al., 1994), affective and symbolic needs (Gatersleben, 2007; Steg, Vlek, and Slotegraaf, 2001; Stokes and Hallett, 1992), privacy (Hiscock et al., 2002; Mann and Abraham, 2006) and autonomy (Hiscock et al., 2002; Ory and Mokhtarian, 2005; all cited in Murtagh, Gatersleben and Uzzell, 2010:15) can all be more influential for the choice of transport mode than functional attributes of transport modes such as speed, convenience and comfort. Experiences of travelling are also potentially shaping individual feelings or attitudes. These are mentioned in the section on 'Physical context', in Section 2.4.3 (Contextual factors influencing travel behaviour).

Studying family journeys to school in a suburb of Auckland in New Zealand, Lang, Collins and Kearns (2011) found that, among other factors, individual parents' attitudes such as wanting their children to get exercise, and to be safe in traffic, were important in determining whether parents walked or drove their children to school.

Carver, Timperio and Crawford, in their quantitative study of school children in urban and rural places in Victoria in Australia, found that one of the main reasons parents did not walk with their children to school was that the distance to school was subjectively considered not walkable. 60 per cent of the primary school children who were driven to school did not attend their nearest school, pointing to parents' free school choice and resulting distances, as one of the factors why children were driven to school (Carver, Timperio and Crawford, 2013:75; see also Hillman, 2006; Fyhri et al., 2011). The study however does not explain sufficiently why the parents of the remaining 40 per cent of children considered the distance to school too far to walk. The children of these parents attended their nearest school, which in many cases (especially in the urban areas studied) probably was in walking distance. This indicates that the concept of walkability is dependent on context and varies among individuals. This means that travel mode choice to school can only to a limited extent be explained by geographical distances. Similarly, Stark, Frühwirth and Aschauer (2018), found in their study of children's independent and active mobility in Vienna, that parental attitudes towards independent mobility were important.

Sometimes segmentation techniques referring to lifestyles, which are partly based on individual attitudes, are used to group people into transport behaviour types including types that are more likely to change towards more sustainable travel behaviour. An example is Anable's application of social psychology to segment people into types according to travel behaviour as well as travel related attitudes. Attitudes in this study were expressed in statements such as 'I like travelling in a car' or 'I am trying to use the car less for environmental reasons' (Anable, 2005).

Another example is the segmentation study commissioned by the Department for Transport in 2011, which was referred to in Chapter 1 (Introduction). Thornton et al. (2011) derived nine distinct travel behaviour types among the UK population. These resulted from the statistical analysis of data from a national travel survey and further refinement through focus groups. The researchers focussed on a number of factors,

such as level and characteristics of car use, working from home routines, as well as individual factors such as environmental awareness, attitudes towards walking, cycling and public transport, and interest in car sharing and food delivery. They concluded that the segment of 'educated suburban families' was more likely than other segments to change their travel behaviour towards more environmentally sustainable practices, which could be achieved by offering sufficient incentives (Thornton et al., 2011). While such segmentation studies give an indication of the types of people who might be more likely than others to change their travel behaviour towards more sustainable modes of transport, they cannot necessarily be used to reliably predict such changes in travel behaviour.

Several individual factors have been found to influence travel behaviour, however, overall, the evidence of how, and to what extent, individual factors influence travel behaviour, has remained inconclusive. For example, a recurring criticism is that individual attitudes cannot predict behaviour, which is why a 'value-action gap' (Blake, 1999) often exists (Barr and Prillwitz, 2014), e.g. a stated interest in taking up cycling doesn't necessarily lead to such action.

Some researchers therefore suggest that studies would benefit from a wider view on travel behaviour, including all kinds of different influencing factors and contexts. Cairns et al. (2014:113) for example highlight that segmentation studies often primarily focus on individuals' attitudes when studying potential changes in travel behaviour and choice of transport modes. Such studies have so far neglected to include individuals' membership of social groups, and how these influence the likelihood of individuals to change their travel behaviour. The following section presents an overview of research on the social factors influencing travel behaviour.

### 2.4.2 Social factors influencing travel behaviour

Coinciding with and following on from research on individual factors influencing travel behaviour were a number of studies starting from the idea that individual behaviour must be seen in its social context – that it is influenced by the social environment in which it takes place. Bean, Kearns and Collins (2008:2845) emphasised individual and social factors influencing travel behaviour in the conclusion of their study on social values and attitudes of walking and driving by arguing that, "…walking and driving cannot be understood simply as behaviours

facilitated or inhibited by urban form. Rather, they are mobilities with deep-seated social meanings." Impacts of the social environment on travel behaviour are potentially relevant in the case of families as social groups of people who share experiences and understandings.

**Identity**

One strand of research on social factors studies people's identities. Murtagh, Gatersleben and Uzzell (2010) for their study on travel mode choice of UK urban and suburban parents for regular journeys, including to work or to school, used a definition of identity based on sociological role theory. Identity is a social role, with associated norms and expectations, which is internalised by an individual. People usually have multiple identities that can contradict each other (Breakwell, 1986; Stryker, 1987; in Murtagh, Gatersleben and Uzzell, 2010:6). Murtagh, Gatersleben and Uzzell found that transport mode related identities such as being a motorist or cyclist as well as other identities such as parent or worker identities had an impact on travel mode choice (Murtagh, Gatersleben and Uzzell, 2010). Also Jarvis, Pratt and Cheng-Chong Wu (2001), studying the everyday lives of households in the UK and the US found that travel behaviour of people is embedded in a constellation of overlapping and contested interests associated with identities. "Multiple identities are associated with gender, occupational status, housing position, attachment to locale and the interdependent effects of these on residential location and mobility" (Jarvis, Pratt and Cheng-Chong Wu, 2001:121).

The 'parent' identity is one of the strongest identities, the fulfilment of which, e.g. through the engagement in children's development by choosing the right schools and after-school activities, is often prioritised. Everyday travel contributes to this process, firstly, by getting parents and children to the places where they can perform their identities. The car, due to its relative flexibility and speed, can be especially useful in satisfying the needs of multiple identities, including those of parents (Murtagh, Gatersleben and Uzzell, 2012; Waitt and Harada, 2012). However, being a good parent can also be achieved through transport mode choices themselves, e.g. choosing the car as a 'safe' transport mode or providing children with exercise through walking or cycling. Furthermore, the use of transport modes can be directly associated with identities. People might choose one mode of transport over another

depending on whether they identify with the respective stereotypes, e.g. they might cycle, or drive as an expression of their identity.

Identities have an impact on travel behaviour. However, Murtagh, Gatersleben and Uzzell found in their review of studies on travel behaviour, that identity was defined in a number of ways by different researchers, each focusing on different aspects, such as autonomy, self-presentation or status. Research is therefore diverse and potentially incongruent, which has to be taken into account when attempting to draw any conclusions from it on the impact of identity on travel behaviour (Murtagh, Gatersleben and Uzzell, 2010:5-6).

**Social norms**

Closely related to identities are social norms, i.e. the attitudes and behaviours that are considered acceptable or normal among social groups. In some places there are social norms directly related to travel behaviour, i.e. about the social acceptability of specific transport modes. Waitt and Harada (2012:3222) researched the embodied experience of driving in an Australian suburb and found social norms related to car use to be influential. Car ownership was seen as a facilitator for caring for the family and fostering sociability, while large four-wheel drives were perceived as especially prestigious. As a result, car ownership and use increased the social status of residents. Driving was the main mode of transport used in this suburb.

Very strong social norms were also identified within other everyday life spheres of families, such as the raising of children or caring for others in general, which in turn have an impact on travel behaviour. An example is sending children to after-school activities, and in many places parents feel the need to keep up with other families in doing so (Fotel, 2007; in Fyhri et al., 2011). Dowling (2000) researched suburban mothers' car use in Australia. Here, the main social norms were to facilitate interesting activities for children, a good choice of school, as well as children's safety. As a consequence, mothers mostly drove, often to schools or after-school activities further than the nearest available.

The same social norm can result in different behaviours. Moreover, some social norms are stronger than others. Also, social norms are not the only factors influencing travel behaviour and can be overridden themselves. Bean, Kearns and

Collins (2008:2842-2843) found that among residents of suburbs of Auckland in New Zealand, driving a car was mainly associated with positive social values, i.e. caring for others and facilitating social life, despite awareness of the negative environmental impacts and irritation about long commutes or delays in traffic. At the same time, walking was perceived to be a positive social activity, e.g. walking with, or among, others. However, in this study sample, driving remained the main mode of transport. Similarly, Dowling (2000) found in his study of suburban mothers that most of them drove, irrespective of whether they adhered to social norms about driving as the safest mode of transport, or drove only reluctantly and were aware of the negative environmental impacts of driving. Sersli et al. (2020) found mothers cycling with their children in Vancouver were also influenced by strong parenting norms, including the need to keep children safe from traffic.

Social norms can be ambiguous. Murray (2008) emphasises the social norm of keeping children safe. Influential are on the one hand official expert opinions about what a safety risk is (Fotel and Thomsen, 2004; in Murray, 2008:49), e.g. governments often prescribe that parents must accompany children for safety reasons, which also contributes to increased driving. On the other hand there are societal expectations and norms about mothers' individual responsibility for their children's wellbeing, e.g. advocating physical activity and therefore the use of more active modes of travel (Beck and Beck-Gernsheim, 1995; in Murray, 2008:49). This shows that even the strongest social norms of parenting can stand in conflict, a situation which is expected to be resolved by the parents themselves.

Social norms about parenting can, but don't have to be, mediated by class (Fotel, 2007; in Fyhri et al., 2011). For example, Jarvis and Alvanides (2008) compared urban (on average lower income) and more suburban (higher income) families living in the North of England with regard to school choice. The suburban parents were especially interested in their children's education being of high quality, while urban families were satisfied when their children were happy. All parents however shared the social norm of 'being there for your children', including bringing them to and picking them up from school in person.

In summary, social norms, especially around parenting, influence family travel behaviour. The same social norm can influence travel behaviour in different ways, or

can clash with other social norms and influences. This needs to be acknowledged when studying family travel behaviour. Social norms related to raising children are especially powerful. These often lead to car use, either directly, to ensure children travel safely, or due to preferences for good schools and after-school activities which leads to an increase in journeys and distances. However, if other social norms about parenting increased in importance, such as providing children with enough physical exercise, or developing life skills to move safely and independently in public spaces, these could also lead to parents and children walking and cycling more.

**Structural stories**

Social norms can be reflected in broader, often reductionist, but socially widely accepted narratives. Freudendal-Pedersen (2009), found social norms to be significant for the choice of transport mode and general travel behaviour of the families she studied in Copenhagen in Denmark. Social norms underpinned generic narratives around mobility which Freudendal-Pedersen called 'structural stories'. These were considered universally true and unquestionable by the interviewees, and were often presented to directly justify their travel behaviour to themselves and others, and in light of the well-known (but often not very well defined) reasons that speak against, for example, car use, such as increased risk of obesity, accidents and environmental risks.

The most common structural stories she found were: "When one has children, one needs a car", "Trains are always late" and "The car offers possibilities that no other mode of transport can offer" (Freudendal-Pedersen, 2009:34). Structural stories, despite the fact that they often overgeneralise, and in many cases aren't true in practice, i.e. claiming some theoretical potential or best case scenario of travel (what Freudendal-Pedersen terms 'motility'), were used by interviewees to make sense of their everyday travel behaviour (Freudendal-Pedersen, 2009). By definition, the use of such structural stories was widespread and also further cemented any other social norms leading to car use and the dominance of car culture in general. Especially when it comes to the upbringing of children, there often are only a limited number of strong narratives that are socially acceptable (e.g. Miller, 2005; Freudendal-Pedersen, 2009:45).

Within a social environment of structural stories, sometimes weaker but still influential counter narratives can exist, too. McLaren (2018) for example, in her study of parent-child mobility practices in Vancouver, found parents offered narratives against the absolute need to use a car when having children, and against the claim that driving with children is the most comfortable mode of transport.

**Local cultures**

Social norms (established rules of behaviour or standards of conduct) and values (ideals about good or bad behaviour) make up cultural beliefs (Kendall, 2006:55-56), and together with knowledge, language, customs and material objects, these beliefs are the components of a culture (Kendall, 2006:42). There has been some research on how local culture influences travel behaviour.

Whether there is a local cycling culture at all, and whether it is established and growing, emerging, or in decline was found to be influential for potential uptake of cycling. Aldred and Jungnickel studied four different urban areas in England and found that cycling was most likely taken up in the places where it was a part of mainstream culture. In places with established cycling cultures, there were more cycling facilities including places and networks where local competences around cycling could be exchanged and spread. Where cycling was a subculture, only very narrow identities of cycling, and few facilities, existed, which acted as a barrier for the potential uptake of cycling (Aldred and Jungnickel, 2014). However, the study did not focus on families, which are specific when it comes to cycling, i.e. it didn't look at the impact of the limited but developing abilities of children.

Cultures are often locally distinct and can be geared towards different modes of transport in places that are otherwise relatively similar. Ross (2002; in Barker, 2011) found that in one rural area in Scotland the social expectation was for children to move around independently and not be driven by their parents, whereas both Barker (2011) and Kearns et al. (2003, in Barker, 2011) found that in the rural places they studied in England and New Zealand, the car was considered necessary for good parenting, e.g. owning a large car (e.g. people carrier) to exchange lifts of children with other parents (Barker, 2011).

Local cultures often influence travel behaviour through social norms about parenting. Barker (2011) interviewed parents in several rural and suburban areas in the UK, and found that whether parents drove their children to school, was firstly a result of the geographically differing employment patterns of mothers. These were to some extent determined by the local availability of jobs and childcare and mediated by social class, but also influenced and reinforced by local social norms about parenting, or 'mothering'. These norms differed according to neighbourhood. In one area, mothers were supposed to balance both a job and childcare, while in another area, most mothers weren't employed in paid work and preferred this to be able to be there for their children (Barker, 2011:417). Such local cultures of parenting can have a strong impact on the travel behaviour of families, in this study, mothers who worked in paid employment often drove, in order to make it to school and work in time, while mothers who didn't work were sometimes more likely to walk to school.

Again, like identities and social norms, structural stories and local cultures influence travel behaviour - directly or indirectly, as well as locally specifically or generally, and sometimes mediated by gender and class (McLaren, 2018).

As the previous two sections have shown, individual and especially social factors are important influences on travel behaviour. However, they also operate in a context of everyday life co-ordination, with its physical and time limitations, as well as other contextual factors, to which the discussion will turn in the following section.

### 2.4.3 Contextual factors influencing travel behaviour

Contextual factors also influence travel behaviour and can be studied at different levels, from an individual's immediate everyday context, e.g. the household, to the larger societal context, such as policy, economy and culture. Contextual factors add to the complexity of influences on travel behaviour, and often contribute to further strengthening the position of the car as the most useful mode of transport for families to manage complicated everyday lives. In other words, while a context might be favourable for walking or cycling, it is only one part of the influences on travel behaviour, with individual and social factors often already leading to an overwhelming probability of car use. Therefore, the power of contextual factors to lead to sustainable travel behaviour can be limited. As the impacts of policy related to travel behaviour as well as local cultural contexts were already presented in Chapter

1 (Introduction) and Section 2.4.2 (Social factors influencing travel behaviour) respectively, they are not covered in the following sections, which focus on the impact of the economic context and the physical environment on travel behaviour.

**Economic context**

Economic factors can influence travel behaviour, some of which are particularly relevant for families. For example, the majority of parents work and are dependent on childcare which they have to pay for. Childcare costs are relatively high, and together with other factors, such as limited social benefits available, they contribute to many families being under economic stress, which then reinforces the importance of being in employment and able to access adequate childcare. Many families mainly travel by car, which is itself a costly asset to buy and maintain.

Fyhri et al. (2011) studied the independent mobility of children in Norway, Denmark, Finland and the UK and identified several economic reasons for increased car use to transport children, including increased household incomes, leading to higher car ownership, as well as increased shares of double income households leading to more time pressure. Furthermore, more children have access to mobile phones, with which they can more easily organise being driven by parents.

Similarly, Skinner (2003) interviewed mothers to understand how they, on a daily basis, co-ordinate the school run and work, or the likelihood of looking for employment. She found mainly contextual factors influencing travel behaviour. Mothers' co-ordination skills, availability of child care, cost of transport, availability of help by the partner, as well as generally household composition, number and ages of children (especially children being younger than five years old), and parents' employment patterns all have an impact on how mothers travel. Many of these factors are resources, i.e. economic factors, which make family everyday life co-ordination more complex, leading to the need to drive to reach a multitude of destinations (such as school, work, nursery, childminder, etc.) in time (Skinner, 2003).

Having financial resources facilitates car ownership and maintenance, which in turn can give access to benefits that other modes of transport cannot, such as the ability to manage journeys to work as well as childcare on time. Access to a car can furthermore enable people to achieve life goals, e.g. to get into paid employment by

being able to travel to a workplace, buy a property in areas that would be out of reach to work by other modes of transport (Goodman et al., 2012), or be able to choose among a larger number of schools due to being able to drive (Jarvis and Alvanides, 2008).

Other transport modes can of course be costly, too, including public transport and cycling. It could therefore be argued, that having more resources also increases the likelihood of taking up more sustainable modes of transport. However, the point is that economic factors significantly influence families' everyday lives generally and have to be taken into account when studying their travel behaviour.

**Physical context**

One of the main contexts studied in relation to travel behaviour is the physical context. Everyday travel is the movement between different locations, using different modes of transport and associated vehicles as well as transport infrastructure, and traversing built and possibly natural environments.

As discussed in section 2.3 (Travel behaviour research: approaches and theories), research shows that choice of transport mode is related to people's time geography, i.e. the possible length of distances travelled to chosen destinations, within the time frames available, with longer distances and more frequent trips often associated with car use, as these simply would not be feasible to be travelled on foot for example (e.g. Lenntorp, 1976; Hägerstrand, 1970). The car is also most likely to be used where there are no appropriate public transport services available. However, while car dependence generally increases with decreasing accessibility, there are people who still walk, cycle or take public transport in less accessible areas, and even more people who still drive minimal distances in the most accessible areas. Therefore, while physical factors such as distances have to be considered when studying travel behaviour, studies which narrowly focus on the impact of physical accessibility, are less likely to be useful when trying to explain why people use one mode of transport over another in cases when both are feasible, e.g. why people drive distances that they could walk to within ten minutes.

Travel behaviour can also be influenced by the type of physical environment people inhabit (Ewing and Cervero, 2010; Naess, 2006; Handy, 2005; Newman and

Kenworthy 1989). Generally, the more densely populated and mixed use the area, the more likely it is that people can get around other than by car. This is often the case in urban areas where distances between amenities are usually shorter and public transport services relatively frequent and wide ranging. On the other hand, residents in rural areas are most often dependent on using a car for transport. Public transport services are less developed, and while people might be able to walk within a small village, they are still dependent on a car to access amenities and services in larger villages or towns nearby. Suburban areas are another type of physical environment, with varying degrees of accessibility.

'Suburb' and 'suburban' are contested terms. They are often used, both in research and other areas, without being explicitly defined (Hinchcliffe, 2005: 899). Where definitions are given, they differ according to the particular focus of the study (Forsyth, 2012). A report by Gwilliam et al. (1999) for the Joseph Rowntree Foundation identified six categories of UK suburbs, with the main ones, and quite opposite, being 'car suburbs' and 'public transport suburbs'. 'Car suburbs' are characterised by low density, high home ownership and usually dispersed pattern of housing and services, whereas 'public transport suburbs' have medium density, medium home-ownership and housing and services are usually located near each other (Gwilliam et al., 1999, in Joseph Rowntree Foundation, 1999).

For the purpose of this thesis, the definition of suburb is along the lines of that of a 'public transport suburb' (Gwilliam et al., 1999, in Joseph Rowntree Foundation, 1999), i.e. an area on the outskirts of and with public transport connections to a city, where the density is still relatively high and alternative modes of transport than the car are still viable for use as homes and services are located near each other. A 'public transport suburb' offers residents some element of choice on their travel behaviour, i.e. travel behaviour is likely to be influenced by a range of factors, as opposed to a 'car suburb' where accessibility characteristics lead to car use. Many outer London suburbs fall under the definition of 'public transport suburb'. For this thesis, the physical characteristics of an area, while important, are assumed to be only one of several factors influencing travel behaviour. Likewise, it was not expected that the conclusions of this thesis would necessarily be specific to this type of area. Therefore, and applying to all types of urban form, it can only be stated that urban form can

affect the likelihood of people taking other modes than transport than to drive, however, it only goes so far to explain why people travel as they do. It has to be noted that travel behaviour in suburbs is under-researched, with the focus of most research having been on urban areas (Vaughn, Griffiths and Hakley, 2015:14).

Other physical contextual aspects of travel behaviour are the physical objects, materials and spaces, as experienced by people while travelling (Sheller and Urry, 2006; Doughty and Murray, 2014; McLaren, 2018). People travel, using their bodies, often together with a vehicle such as a car, bus, train or bicycle, and coming in contact with physical materials such as roads and pavements, road infrastructure and environments including bus stops and train stations, which are part of different types of built and natural environments. Cycling, for example, necessitates the use of a number of objects - especially when cycling with children - including bicycles, helmets, seats, panniers and weatherproof clothing. These can, for example, make cycling less practical compared to driving which doesn't involve the use of the same number of things. McLaren (2018:851) found that parents valued the 'safe cocoon' of their private car, when travelling with their children.

The experience of the journey itself is also often significant. Jain, Line and Lyons (2011) for example found in their qualitative research with part-time working mothers that despite time pressures, the actual journey to school is important to them, as it gives them an opportunity to socialise, i.e. spending time with their children or meeting other parents along the way or at the school gate (Jain, Line and Lyons, 2011). Furthermore, the environments travelled through may contribute to the travel experience. Built and natural environments can be experienced in different ways, including as safe, relaxing, beautiful, or as the opposites. In summary, how individuals experience these physical contexts of travelling might influence their attitudes and emotions. Furthermore, if many people make similar experiences, these can shape social norms about travel.

**Conclusion**

As was discussed in this section, in addition to the political and cultural environments (e.g. policy and local cultures, as explored in previous sections), economic contexts related to employment, housing and education, and physical contexts such as the physical environment and the material aspects of travelling within it, including the

practical and emotional experiences while travelling, can all influence travel behaviour.

### 2.5 The need for new approaches to research family travel behaviour

As shown in the previous sections, over time and using a number of approaches, researchers of travel behaviour identified a range of different factors influencing it, including individual, social and contextual factors. The potential linkages between these factors are highly apparent, e.g. individual factors such as attitudes only exist in relation to social factors such as social norms, which in turn are part of local cultures. The physical context, including the objects and environments that people come in contact with when they travel in their everyday lives, is also a significant element of the emotional, i.e. individual experience of travelling. Individual and social factors influencing travel behaviour operate in several types of context, which themselves can influence travel behaviour, but also individual and social factors. However, few studies look at all these different types of factors and their interrelationships. This means that crucial interdependencies can be missed and travel behaviour misunderstood.

Another limitation of the body of existing research on influencing factors is that it is relatively fragmented because travel behaviour itself has been conceptualised from a number of different perspectives. Different researchers have focussed on different elements of travel behaviour. Many studies focussed on one or two specific transport modes, such as walking, cycling or driving (e.g. Bean, Kearns and Collins, 2008 (on the social dimension of walking and driving); Pooley et al., 2011 (on walking and cycling)), on specific journeys, such as the commute to work (e.g. Guell et al., 2012; Goodman et al., 2012), or the journey to school (e.g. Jain, Line and Lyons, 2011; Skinner, 2003). This is also how the potential for travel behaviour to become more environmentally sustainable has often been researched: indirectly through a narrow focus on 'active' or 'healthy' travel modes, i.e. walking and cycling (e.g. Goodman et al., 2012 - on healthy travel on the commute to work); Ahlport et al., 2008 - on walking and cycling on the journey to school).

Most of the research on everyday travel looks at travel during the week, i.e. it does not consider leisure or holiday travel. However, this could usefully be included, or at

least considered, to better understand the potential for behaviour change. For example, the principal reason behind owning and using a car during the week, can be to visit friends and relatives at the weekend or for holidays, as the car is perceived as the only practical mode of transport to these destinations.

Furthermore, there has not been much research specifically on family travel behaviour, i.e. hardly any studies consider all members of a family and how their interactions impact on their travel behaviour. The characteristics of travel behaviour involving children at different ages and stages of development, have not been much researched either. Family travel behaviour is often hidden in research on individuals' travel behaviour, where some of the individuals happen to be parents. Research designed to cover family travel behaviour most often focuses on the trip to school (e.g. Murray, 2008 (on mothers, risk and mobility); Barker, 2011 (on parents' involvement in the travel organisation); Lang, Collins and Kearns, 2011 (on mode choice)). An issue that has also not yet received as much attention is children's travel to after-school activities.

In summary, the body of research on the factors influencing travel behaviour highlights the complexity of many different factors influencing travel behaviour. It is hardly possible to generalise from these studies which factors are most important for the outcome of travel behaviour. Despite having already widely used more sophisticated socio-psychological models to explain behaviour, research on travel behaviour was in the early 2000s still criticised for its predominantly technical or economic perspectives (Hanson, 2003; in Shaw and Hesse, 2010; Roe, 2000 in Hall, 2010). Researchers have since called for new approaches, including the use of more qualitative research as a means to better understand travel behaviour in its complexity (e.g. Hanson, 2010).

Many researchers have agreed that influencing factors cannot be researched in isolation, or by focussing on isolated modes of transport, but have to be seen together with all other influences, set within context, specific to individual cases, i.e. lived experience over time (Chatterjee and Scheiner, 2015; Guell et al., 2012; Pooley et al., 2013; Uzzel and Raethzel, 2009; Ahlport et al., 2008; Urry, 2007; Handy, 2005; Jarvis, 2005; Jarvis, Pratt and Cheng-Chong Wu, 2001; Pratt, 1996; Bloyce and White,

2018; McLaren, 2018; Meinherz and Binder, 2020; Vietinghoff, 2021). An everyday life perspective can be useful to this end.

Everyday life has been defined in many different ways, often by sociologists, since the late nineteenth century. Studying everyday life, or what phenomenologists often refer to as life world, allows the study of social life as it often can be: mundane, fluid and heterogeneous (Brinkmann, 2012). Ferguson (2009, in Brinkmann, 2012:16) defined everyday life as "a host of routine activities, private and public, carried out on a regular if not actually daily, basis; such as eating, sleeping, working, commuting, shopping and so on".

Everyday life is a process where people engage in a number of activities, which often have the purpose to satisfy underlying needs. Everyday travel as an activity can meet several family needs. Wind (2014:69-74, 164), referring to Holdsworth (2011), Lassen (2009) and Jarvis (1999), pointed out practical, and also social and emotional needs, which everyday family travel is aiming to meet: practical needs include the physical movement to and from families' daily destinations, social needs are the maintenance of a sense of family and social relationships that can be satisfied by travelling, and emotional needs are the desired sensorial and emotional experiences that are created by travelling. Wind focussed on needs that were directly satisfied through and during travel.

Cultural sociologist Bech-Jørgensen (1994, in Freudendal-Pedersen, 2009:22) proposes that that everyday life cannot be defined, but by taking an analysis of everyday activities as a starting point, we can learn about the underlying conditions of everyday life and people's motives and considerations related to their actions. Brinkmann (2012) also emphasises that both everyday life objects (e.g. products, technologies, or pieces of art) and situations and events (e.g. conversations, work or rituals) mediate people's everyday life experience.

In phenomenology, the life world is characterised as being "an intersubjective world where objects and events appear as meaningful prior to those theorisations we may engage in about them" (Brinkmann, 2012:17). Brinkmann gives the example of the unpleasant experience of not feeling part of the world, prior to a possible formal diagnosis of depression.

For this thesis, everyday life is defined as what people do on a day-to-day basis. This includes for example daily tasks such as house work, childcare, shopping, paid employment as well as the travel involved in everyday life. It also includes what people think and feel, how they interact with others, and how this influences their everyday lives.

Some more recent research has endorsed a wider everyday life perspective to study travel behaviour. Pooley et al. (2013) for example showed that travel behaviour is embedded in wider everyday life. People have to navigate around complexities and contingencies of everyday life, which influences their travel behaviour. This often leads to people choosing to travel by car because it enables greater flexibility. Although closely focusing on people's perceptions and social norms, they conclude that to encourage people to change their travel behaviour, policy-makers need to consider wider societal contexts, including the economic, political, cultural and spatial contexts. For people to change their travel behaviour, they suggest that other transport modes such as walking and cycling need to match the flexibility of the car. This could be achieved through societal changes related to the accessibility of amenities such as schools and nurseries, work policies which permit people to better balance work and private life, and provision of cycling storage in new properties (Pooley et al., 2013).

Goodman et al. (2012: 1937) also highlight the importance of a wider, everyday life view for researching travel behaviour, i.e. looking at individuals' aspirations in the context of everyday life, and the impacts of this relationship on travel behaviour. They refer to anthropology of wellbeing research by Weisner (2009: 228; in Goodman et al., 2012:1937), which suggests that, for aspirations to be realised, they need to fit with the given context that people live in. Everyday routines are the underpinning of this reconciliation, and need to maintain stability, as well as be flexible enough to absorb unexpected events. Goodman et al. (2012) found that context and aspirations can often most easily be reconciled using the car as mode of transport, e.g. for the daily commute.

Rau and Sattlegger (2017) took a relational view on everyday family mobility and point out that each family's needs, including related to meaning have to continue to

be met by a sustainable form of household 'elasticity' if families are to change their travel behaviour (including to more environmentally sustainable ones).

Similar to Goodman et al. (2012), Gibson et al. (2011) propose to research sustainable household consumption (which includes travel behaviour), by better harnessing the social and cultural idiosyncrasies of households' everyday lives. "It is important to focus not only on specific practices (recycling, composting, car use), but also the total context in which they are embedded (Hobson, 2006; Slocum, 2004)" (Gibson et al. , 2011:6). For example, research on driving behaviour which focuses on data such as routes and stops on the way, will miss out on important information about who is driving, how driving fits into people's everyday life and what driving means to them (Dowling, 2000).

McLaren (2018) points out the necessity of studying mobility as relational (e.g. looking at parent-child mobility in the context of local urban design) and influenced by everyday spheres of parenting, as well as mediated by gender, race and class.

These examples highlight the need for the different individual, social and contextual factors influencing travel behaviour to be meaningfully considered together, e.g. as embedded in people's everyday lives. An everyday life perspective could include a focus on families, the interrelationships of the different family members' behaviours and the characteristics of family life. There is a paucity of such research, especially with respect to family travel behaviour and its potential to become more environmentally sustainable.

One method to study the everyday life of people is to let people describe it themselves, i.e. eliciting people's subjective narratives. One characteristic of the narratives that people offer is that they can be conflicting. Pooley et al. (2011) found that people expressed both negative and positive judgements of the same mode of transport. Waitt and Harada (2012:3320) showed that car drivers often emphasise the convenience of the car for organising everyday life, while also stating that they suffer from the inconveniences that come with car use, such as traffic congestion. Similarly, McLaren (2018) found that parents offered counter-narratives to the hegemony of automobility, identifying 'cracks' in the system. Southerton (2003) found in his interviews with suburban households that people immediately offered a set of generic narratives about why people nowadays feel time-squeezed, such as

'people consume more' and 'people work more'. When analysing what interviewees said about their actual experiences he found that the reason for them feeling harried were more straightforward scheduling and co-ordination problems.

A similar issue was found by Freudendal-Pedersen (2009:90) when she studied structural stories: people seemed to value the theoretical advantages that car use offers, i.e. they valued the potential benefits of car use; however, when talking about specific journeys, interviewees often expressed discontent with car use. For example, having a car is often perceived as increasing individual mobility and freedom, but at the same time the actual experience of sitting in traffic can be perceived as limiting.

Far from being just incoherent, these diverging narratives are part of the same life world of people, often offering additional evidence, as they reflect where people's narratives conflict with the external circumstances and societal structures they live in. A comprehensive everyday life perspective, also acknowledging people's subjective narratives, is a useful way forward to improving the understanding of family travel behaviour.

### 2.6 Theories, concepts and studies to inspire a new research approach

This section lays out some relevant theoretical debates, concepts and studies that could inspire a new everyday life focussed approach to researching family travel behaviour. The first sub-section details elements of practice theory, as well as studies which have applied practice theory, and which could form part of an everyday life perspective on family travel behaviour. The second sub-section highlights the relevance of the concept of relationality for family travel behaviour. Finally, the third sub-section presents how potential change in family travel behaviour could be conceptualised with the help of practice theory elements.

#### 2.6.1 Practice theory to study everyday life

A research approach to achieve a better understanding of family travel behaviour needs to include a view on the interactions between all influencing factors, look at the family with all its members, and see travel behaviour as embedded in a family's everyday life.

Highly relevant for the consideration of how different factors work together, and a much debated issue in the social sciences is how agency (an individual's will) and structure (external factors) influence people's behaviour. Most prominent in this respect has been structuration theory, especially the contribution by Anthony Giddens. Giddens proposed to look at agency and structure as a 'duality of structure'. He loosely defined structure as the 'routinised interactions of people'. Structures are fluid and established through routines and repetition. Institutions mediate between agents and structures, and can be formal (e.g. government departments and bodies) or informal (e.g. households, labour or housing markets) (Giddens, 1984; in Jarvis, Pratt and Cheng-Chong Wu, 2001:38-39).

Often inspired by Giddens' structuration theory, and as a response to the need for a better understanding of transport in society, around the year 2000 the 'new mobilities paradigm' emerged (Sheller and Urry, 2006), mainly from within the field of sociology and the social sciences. As previous research approaches had been limited in explaining travel behaviour, the focus of the researchers engaging with this new field now moved away from individuals' choice of transport modes, and to mobility and its role in society more broadly. Some research has since looked at movement within its wider everyday context, often researching households rather than individuals only (e.g. Freudendal-Pedersen, 2009; Knowles, Shaw and Docherty, 2009; Urry, 2007; in Barr and Prillwitz, 2012).

Some innovative theories and methods have been used in this new wave of mobilities research (Shaw and Hesse, 2010). One group of theories that look closer at the micro-level of behaviour come under the umbrella of practice theory. They are influenced by cultural theorists such as, for example, Bourdieu (1990), Giddens (1984), Schatzki et al. (2001) and Shove et al. (2012) (Butler et al., 2014:3-4). For example, Butler et al. (2014:4) drew for their practice theory inspired study mainly on Bourdieu's (1990; 1998) concepts of dispositions, habitus, social field and social reproduction, which bring together objective social structures (social fields) and subjective experiences of actors (dispositions), resulting in action which has incorporated structures (habitus). Individual agency can therefore be considered socially constructed (Bourdieu, 1990; in Butler et al., 2014:4). Furthermore, subjective social concepts are formed through continuous action and material arrangements, and influence and are in turn

influenced by objective social concepts – the process of social reproduction (Bourdieu, 1998; in Butler et al., 2014:4-5).

Practice theory is diverse and does not offer a single, concrete theoretical 'system', however can be used as a heuristic tool, to guide the research of social phenomena (Reckwitz, 2007). Two common features of practice theory are that it is interested in an everyday life perspective and that it is influenced by the interpretative or cultural turn in social theory (Reckwitz, 2007).

Practice theory proposes that outcomes of social action are determined neither by individuals' intentions nor structures only, but are worked out in practice (see Pile and Thrift 1995; and Carlstein, 1982; in Jarvis, Pratt and Cheng-Chong Wu, 2001:39). This perspective emphasises the 'subjective, situated and embodied nature of social action' (e.g. Game, 1991; in Jarvis, Pratt and Cheng-Chong Wu, 2001:40). Elements that make up practices are the material, i.e. objects, infrastructures, human bodies; the procedural, i.e. know-how, competences; the symbolic, i.e. meanings, identities, norms; and the affective, i.e. feelings, emotions, moods and atmospheres (Reckwitz, 2002:249-250).

Social practices are the unit of analysis in practice theory, with individuals being carriers of these practices. Research on practices focuses on how they capture and lose individuals and how systems form and fragment. Practices are for example eating, walking or sleeping (Reckwitz, 2002; in Shove, 2010:1279). Individual practices are also interrelated (Hitchings, 2011; in Kent and Dowling, 2013). A typical research question using practice theory would be: 'How do different elements of the system contribute to reproduce and sustain certain practices?' Practice theory also acknowledges changes and dynamic relationships.

Shove argued that, although research and policy recognise a vast number of behaviour-influencing factors, neither looks at how these interrelate with behaviour, and that behaviour, together with influencing factors, might actually be embedded in a system of elements, not exist separately from it. Through a practice theory perspective, daily life can be seen as interacting with institutions and infrastructures, as opposed to individual needs and attitudes driving behaviour. New, more holistic, research approaches need to ask how these needs and attitudes come about in the first place, how environmentally unsustainable practices are reproduced, and how

they change (Shove, 2010:2177). Taking a practice system view, it not only becomes evident that behaviours interact with the other elements of the system, but that already the perceived needs and aspirations of people are structured by these elements (Shove, 2010).

Practice theory has not been much applied to the empirical study of behaviours (Cairns et al., 2014:109; Butler, Parkhill and Pidgeon, 2014:2) and (family) travel behaviour in particular. One exception is Urry who analysed the larger 'automotive system', including among other elements the car as a manufactured object, the car as an item of individual consumption, automobility as a socio-technical complex including infrastructure, as well as automobility as the predominant mode of mobility. These elements create affordances for travel but also systematically lock people into car based lifestyles (Urry, 2004).

Butler et al. (2014) used a practice theoretical lens based on concepts by Bourdieu (1990, 1998) and Wilk (1990) to study choice, values and agency related to household energy consumption in all its forms. They found social norms e.g. about parenting or work, as well as material contexts such as the development of technologies and infrastructure both coinciding and interacting to influence energy consumption. At the same time, practices influence each other, e.g. Butler et al. referred to the example of the evolution of food shopping from daily to larger, more infrequent shopping trips and the consequences this had on transport practices, i.e. increased use of the car, which made the development of large shopping centres at the outskirts of towns and cities feasible (Butler, Parkhill and Pidgeon, 2014).

A different attempt at a comprehensive perspective was made by Jarvis, Pratt and Cheng-Chong Wu (2001). The authors focussed on family households' everyday life and its daily task co-ordinations at the micro-level.

Applying elements of structuration theory and practice theory, they found that individuals are influenced by household structure (including practices, habits and routine arrangements) and in turn influence household structure with their actions. Household structure is influenced by institutions such as class and gender, mediating "the distribution and interplay of power (material, moral, emotional) and resources (money, property, knowledge) through daily household practices" (Jarvis, Pratt and Cheng-Chong Wu, 2001:89-90). The household and its individuals are set in the social

and organisational or institutional context, an approach that they refer to as 'situated understanding'.

An example for contextual impacts on everyday life of families is that in the UK today, both women and men, regardless of whether they have children, are socially expected (and many wish) to engage in paid employment. Work is also the basis for ensuring necessary household income to cover expenses, often requiring two adults in a household to work (Descartes, Kottak and Kelly, 2007). Added to this, gender is another factor influencing everyday life co-ordination. Although the majority of women work in paid employment after they have a child, they also still do more of the household and child caring work than fathers (Miller, 2012) and are therefore most often the main parent responsible for the everyday co-ordination of their children's travel (Office for National Statistics, 2006; in Jain, Line and Lyons, 2011:2). This can lead to more time pressure for women, which in turn can lead to higher car use.

For the home-work organisation to change towards more equality between parents, contextual changes such as increasing the amount of paternity leave, paternity pay and flexible working arrangements must happen, however, Miller noted that also social norms around whether mothers or fathers are expected to care for children, or work, would have to change for parents to engage in household and child care more equally (Miller, 2012). Such changes could relieve time pressures around the everyday home-work co-ordination, however, it is hard to say whether this would also lead to a decrease in car use (see above, as put into doubt by the findings of Hjorthol and Fyhri (2009:214)).

The level of context that Jarvis, Pratt and Cheng-Chong Wu looked at starts at the immediate household level, i.e. the dimension of social reproduction (including household and childcare work, education, shopping and recreation) which firmly underpins and interacts with the wider spheres of employment, housing provision and transport (Jarvis, Pratt and Cheng-Chong Wu, 2001:15). Pratt (1996) defines institutions as mediating between agents and structures, e.g. labour markets mediate between supply (employees) and demand (employers). No market works perfectly, and to understand coordination problems in everyday life, one has to take into

account the institutions that people live with, e.g. their households and labour and housing markets.

For example, there are local cultures and social norms that influence and are influenced by household employment patterns, which in turn are influenced by labour markets and housing costs (Jarvis, Pratt and Cheng-Chong Wu, 2001:120-121). The co-ordination of home and work life is an everyday task, however, it also serves underlying longer-term aims and aspirations of family members, such as providing children with a good upbringing, achieving a stable household economy and taking care of personal needs of adults, for example.

### 2.6.2 Relationality as characteristic of family everyday life

The complexity of family everyday life co-ordination and travel behaviour as embedded in it, can be highlighted by applying the concept of relationality.

Wind (2014) in his phenomenological study of family everyday travel behaviour, identified a family's mobility practice as "a subset of practice, [which] can be conceptualised as a social and co-ordinated relational-material assemblage in continual process" (Wind, 2014:78). By relationality with regards to people, he means that one family member's travel behaviour can be made possible by, contradict, support or coincide with other family members' travel behaviour, which can be mobile, mobile with restrictions or immobile. For example, if one partner in the household takes public transport to work, the other partner can use the one family car for the school run. The parent who brings the children to school might then have to work late, which means that the other parent must start work early in order to be able to pick up the children from school. A case of immobility is when one partner stays at home at night to watch the children while the other goes out.

Relationality is not limited to family travel behaviour, but affects families' whole everyday life co-ordination. In fact, everything family members do is to some extent practically, economically, socially or emotionally influenced by the other members of the family (Jensen, Sheller and Wind, 2014) and generally by relationships with "objects, technologies and socialities" (Sheller and Urry, 2006:214). Household members usually share everyday tasks, co-ordinating paid employment and household duties such as shopping, cooking, cleaning, looking after children, etc.

These tasks are co-ordinated among partners or with others, including relatives, friends and paid staff (such as cleaners, child minders, etc.). Family members who engage in productive labour, e.g. paid work, are often dependent on others to cover the household's reproductive, informal, unpaid activities (see e.g. Wilkinson, 2000; in Jarvis, Pratt and Cheng-Chong Wu, 2001:15). McLaren (2018) found that meaning, materiality and skills were factors in the relationality of parent-child mobility.

Travel facilitates the co-ordination of home and work life, including travelling to work, childcare, schools and shopping, each taking place in different locations and at different times (e.g. Fortuijn and Karsten, 1989; Jarvis, Pratt and Cheng-Chong Wu, 2001; Jarvis, 2003; Jarvis, 2005). And, especially for families, the everyday task co-ordination and negotiation among several household members can be extensive and lead to stressful commitments, which can have a significant influence on travel behaviour, e.g. leading to increased car use to make it to destinations in time (Jarvis, Pratt and Cheng-Chong Wu, 2001).

An individual's travel behaviour therefore takes place within the context of the family and specifically the household unit, i.e. family members' needs and actions are corresponding with other family members' needs and actions when making decisions about travel choices, and these are related to longer-term decisions about paid work, education, household work, etc. (Jarvis, Pratt and Cheng-Chong Wu, 2001:57). Due to these interrelations, families' everyday life arrangements are "fluid, negotiated and change over time and context" (Barker, 2011: 416).

The interplay of individual, household, and social reproduction, as well as wider contextual levels can be harmonious; however, for most people it also involves the regular or continuous occurrence of friction. For example, Jarvis, Pratt and Cheng-Chong Wu found that couples often need to compromise when it comes to fitting in work with family obligations (Jarvis, Pratt and Cheng-Chong Wu, 2001:15-16). In order to enable one partner to leave early to get to work, the other partner might have to find work in the vicinity of the home to be able to bring their children to school and to pick them up. This limits their choice of jobs (Craig and Van Tienoven, 2019).

Similarly, Southerton (2003) found that people feel time-squeezed due to the challenge of co-ordinating daily life around the time frames of their own and others' (who are involved in their daily life) activities. Scheduling and imposing routines often

helps, but it doesn't solve the problem of the feeling of time-squeeze, as individuals' destinations and schedules may vary widely. Due to this complexity, possible solutions to decrease car use on the journey to school are difficult to realise. Jain, Line and Lyons (2011) for example, found that while lift-sharing is socially accepted and occasionally practiced, it often is difficult to organise, as each family has their own journey origins, destinations and time requirements. Using a car, due to the relative flexibility it offers, helps many families achieve a better co-ordination of their individual everyday lives (Jain, Line and Lyons, 2011).

Furthermore, in sections 2.4.2 (Social factors influencing travel behaviour) and 2.4.3 (Contextual factors influencing travel behaviour) the impacts of social and material contexts on travel behaviour were discussed, including impacts of identities and social norms, local culture, as well as objects used and environments passed through when travelling. These are all part of relationality, too, i.e. the relationships that people have with other people, places and things while going about their everyday lives (e.g. Craig and Van Tienoven, 2019; Rau and Sattlegger, 2017; Butler et al., 2014; Manderscheid, 2014; Barker, 2011; Jarvis, Pratt and Cheng-Chong Wu, 2001).

An example of relationality, with regard to the physical and material dimensions of travel, would be choosing a travel route and mode of transport related to the practical or emotional experience associated with it, such as walking a detour through a park because it is the most enjoyable route, or going by car because of the perceived impracticability of cycling having to manoeuvre cycling gear and being exposed to the elements.

### 2.6.3 Practice theory and change in travel behaviour

Turning to potential change in travel behaviour towards more environmental sustainability, it is evident from the previous sections, that such change, just like travel behaviour itself, is not influenced by individual will and choice alone (Giddens, 1984, in Jarvis, Pratt and Cheng-Chong Wu, 2001:38-39). According to Watson (2012), practices can change in different ways. For example, they change when its elements change, e.g. when new technologies are introduced and adopted. Also, the people performing practices can change. Thirdly, practices have to be seen as interrelating with each other. Transport practices such as driving or cycling for example, are closely related to practices of the household, childcare, work and shopping.

That means that the practice of driving might change, along with changes in the practice of work and taking care of a family household. For example, a historic increase of dual earner households leads to an increase in car use, due to more households suffering from a clash in the timing of work and school. Similarly, changes in practices of parenting, causing increased participation of children in after-school activities (which in turn is partly related to the increase in dual earner households), leads to people driving more.

Another systematic perspective on change in travel behaviour can be the household everyday life co-ordination of families within their wider societal contexts, as examined by Jarvis, Pratt and Cheng-Chong Wu (2001), and mentioned previously. One focus of this perspective is the significance of how different individuals and their needs relate. This means that any changes towards more environmentally sustainable travel behaviour need to fit in with the everyday social reproduction of the individual household within their unique context (Jarvis, Pratt and Cheng-Chong Wu, 2001:10; 3). For change to happen, the different spheres (e.g. work and home) need to be matched and co-ordinated better to facilitate more sustainable urban development (Jarvis, Pratt and Cheng-Chong Wu, 2001: 74), including sustainable travel behaviour. Jarvis, Pratt and Cheng-Chong Wu (2001:70) also concluded that due to the fact that a contextual condition can be enabling for one household and at the same time constraining for another household, policy for sustainable transport needs to offer variety and flexibility, however, prioritising higher levels of accessibility over higher levels of mobility for the sake of it.

Considering changes in travel behaviour it is evident that the system within which travel behaviour exists is dynamic, i.e. continuously evolving (e.g. Barker, 2011:416). “Everyday life is to be understood as the way we live, maintain and renew, which is constantly being recreated and continuously transforming each day” (Freudendal-Pedersen, 2009:31-32). Repeated performances of a practice for example, contribute to the likelihood of it becoming increasingly stable, i.e. long existent practices can be difficult to change more profoundly, as during the process of them becoming more stable, the whole system is influenced to become more accommodating to the practice, which in turn contributes to its further consolidation. Sersli et al. (2020), for example, point to the need to recognise different phases of change in travel

behaviours, as found by them in their research on family households and cycling with children.

An example is government policy and regulation. These often reproduce established material and social contexts that in turn underpin certain common practices. Butler et al. (2014) suggested that governments should reflect on their existing policies and regulations and alter or remove those that are barriers to more sustainable behaviours. This would extend the state's role from trying to encourage citizens to change their behaviours, to acknowledging its role in reproducing unsustainable behaviour. However there are generally not many governments who are reflective and radical enough to cause the amount of change necessary for society to become more sustainable.

On the other hand, the dynamic nature of practices also continuously offers new opportunities for potential change processes to start. Doughty and Murray (2014:9) looked at everyday mobilities and defined everyday mobile practices as 'social texts' and "processes by which governmental and institutional framings become accepted and embodied" but also "contested, (…) diluted or transformed in the context of everyday flows and disruptions of mobilities." People-led, bottom-up innovations are such an area from which change could originate. These are values and practices that already exist in places and which are different from mainstream practices (Butler et al., 2014). In the area of environmentally sustainable behaviour these can for example include car-free living, car sharing, or using walking or cycling as main mode of transport.

Sahakian and Wilhite (2013) argued that alternative practices need communities to successfully develop. They refer to Lave and Wenger who propose that for practices to change, people have to engage in participatory and social learning in communities of practice, where learning takes place both cognitively and practically (Lave, 1991; Lave and Wenger, 1991/2009, in Sahakian and Wilhite, 2013). While such niche practices might never become the mainstream, they nevertheless are important impulses for society to change and can contribute to knowledge of behaviour and behaviour change (Butler et al., 2014).

**Conclusion**

Some of the more recent research approaches under the new mobilities paradigm, often using practice theory, give useful inspiration to also research family travel behaviour more comprehensively. This involves the application of an everyday life perspective and looking beyond individual action and its motivation, to households and their members and relevant others.

It was shown that family travel behaviour is not only influenced by the contribution of relationality to the complexity of everyday life co-ordination, resulting in a multitude of destinations, distances and times. Also the choices of the activities travelled to and modes of transport used are influenced by what individuals (family members and other social relations) think, feel and do, as well as by the interaction of several individuals.

Everyday life co-ordination is complex and travel behaviour is only one of the activities located in "this whole complex web" (Jarvis, Pratt and Cheng-Chong Wu, 2001:3). It can therefore be argued that the household should be the focus for analysis of urban life (Jarvis, Pratt and Cheng-Chong Wu, 2001:16), looking at family everyday life co-ordination and travel behaviour as embedded in it.

An example of research that applies practice and systems theory is the work on the everyday lives of households (including families with children) by Jarvis, Pratt and Cheng-Chong Wu (2001). Their perspective focused on the micro-level of the household and how household everyday practices interrelate among individuals as well as with each other, within their context and institutions. It revealed how travel behaviour is embedded in the everyday life of families, as part of a household's processes of co-ordination and negotiation of everyday tasks and activities. Jarvis, Pratt and Cheng-Chong Wu (2001) didn't aim to research travel behaviour specifically, however their general approach using an everyday life perspective could usefully inspire a new approach to studying family travel behaviour. While considering elements of practice theory, such a household-focussed approach doesn't use practices as a unit of research but looks at systems of everyday life co-ordination of households, and how these are made up of different elements such as influencing factors and activities, including everyday travel.

## 2.7 Summary of the literature review, research gap, and conceptual framework

### 2.7.1 Summary of the literature review

Families have particular characteristics when it comes to travel behaviour, from children's developing abilities to move around (independently), to the impact of the complex relationality between family members and their destinations, such as work, school, nursery, and shops, as well as of the material and emotional experiences while travelling, all influenced by its different contexts. A topic that generates much family travel but where research is especially lacking, is children's after-school activities. Travel behaviour is influenced by a range of individual, social and contextual factors. Their interplay is complex and research is still inconclusive.

While many researchers call for more comprehensive approaches to considering the complexity of travel behaviour, much research still focuses on specific modes of transport (such as walking or cycling), journeys (such as to work or to school) or times (everyday travel not including leisure and holidays). Whether researchers have taken a wider or narrower lens of analysis, they have most often found that the car as a mode of transport is the most practical to accommodate people's attitudes, beliefs, social norms as well as the context in which people live.

There has in previous years been a move towards more qualitative research, and current approaches using practice theory promise to better capture and understand travel behaviour. Such approaches go beyond the simplistic idea of individuals' attitudes leading to behaviour via contextual barriers or facilitators. They conceptualise travel behaviour as a practice which is part of a system of interrelating elements such as other practices, people, institutions, materials, resources, power, meanings and norms as well as feelings and emotions. Mediating factors can be class and gender. While individuals and households are part of these dynamic systems, how they play out is different for every household.

A more holistic perspective on family travel behaviour, with a focus on families' everyday lives, including all modes of transport and journeys, and looking at households, as well as individuals' interrelationships, is needed. While inspired by practice theory, such an everyday life perspective doesn't have to have practices as

their unit of research, but could focus on everyday household co-ordination, i.e. on the micro-level, such as used by Jarvis, Pratt and Cheng-Chong Wu (2001).

### 2.7.2 Research gap

The literature review highlighted that travel behaviour is complex and that there is a multitude of interrelated, dynamic factors influencing it. However, there is a paucity of comprehensive research specifically on the travel behaviour of suburban families with children, and on how it can become more environmentally sustainable. New approaches to researching family travel behaviour need to be explored. The research gap that this study aims to address, is the lack of such new approaches, specifically approaches that employ an everyday life perspective.

This study therefore investigates the nature of family travel behaviour in an outer London suburb, how it is shaped, and how more sustainable travel practices can be supported. The study looks at travel behaviour as embedded in families' everyday lives, i.e. at what family members do and why, on a day-to-day basis, and how this is related to travel behaviour. It focuses on family households including all their members and their everyday travel behaviour, including all relevant destinations, modes of transport, and times. Travel on weekends and on holidays is also included where relevant, e.g. where it contributes to a family's car dependence. The aim is to learn more about family travel behaviour and how it could become more sustainable.

In order to ensure a comprehensive approach, this study systematically considers family members' everyday life co-ordination, and how travel behaviour is embedded within it. It identifies the factors influencing travel behaviour, their interrelationships and dynamics. Furthermore, dynamics between family members related to everyday life co-ordination, such as the organisation and negotiation of tasks, e.g. going to work and caring for children are considered, and how these relate to family travel behaviour.

### 2.7.3 Conceptual framework

The proposed conceptual framework (Figure 1) serves as a guide to the empirical research by broadly setting out potential elements around which to research, as found from the literature review. This framework is only one way of conceptualising family travel behaviour and is – in conformity with the relatively open research

approach used for this study (which will be proposed in Chapter 3 (Methodology)) – only a starting point.

The initial conceptual framework shows family households as made up of their individual members, i.e. adults and children. Everyday life is a continuous process where individual (e.g. attitudes or feelings), social (e.g. social norms) and contextual (from personal circumstances to influences from wider societal contexts) factors all work together to influence what individuals aim to do, set within contextual possibilities and restraints. Family members together co-ordinate and negotiate, resulting in activities that fulfil everyday life tasks. Travel behaviour is one of these activities and is interrelated with, and often a result of, all other activities of a family's everyday life. The elements and processes that make up everyday life are dynamic and constantly evolving, through continuous practice.

As proposed by this conceptual framework, the holistic perspective on a household's everyday life allows for the investigation of how different types of factors work together, and how both individuals and activities are related with and among each other. All of those elements become more visible in the big picture of everyday household co-ordination and negotiation in its context and as seen over time. Although it is a 'whole complex web', as identified by Jarvis, Pratt and Cheng-Chong Wu (2001:3), i.e. it is difficult to research comprehensively and draw definite conclusions from, travel behaviour of families nevertheless has to be considered from such a wide perspective, in order to gain new insights to, and a better understanding of it, and of how it can become more sustainable.

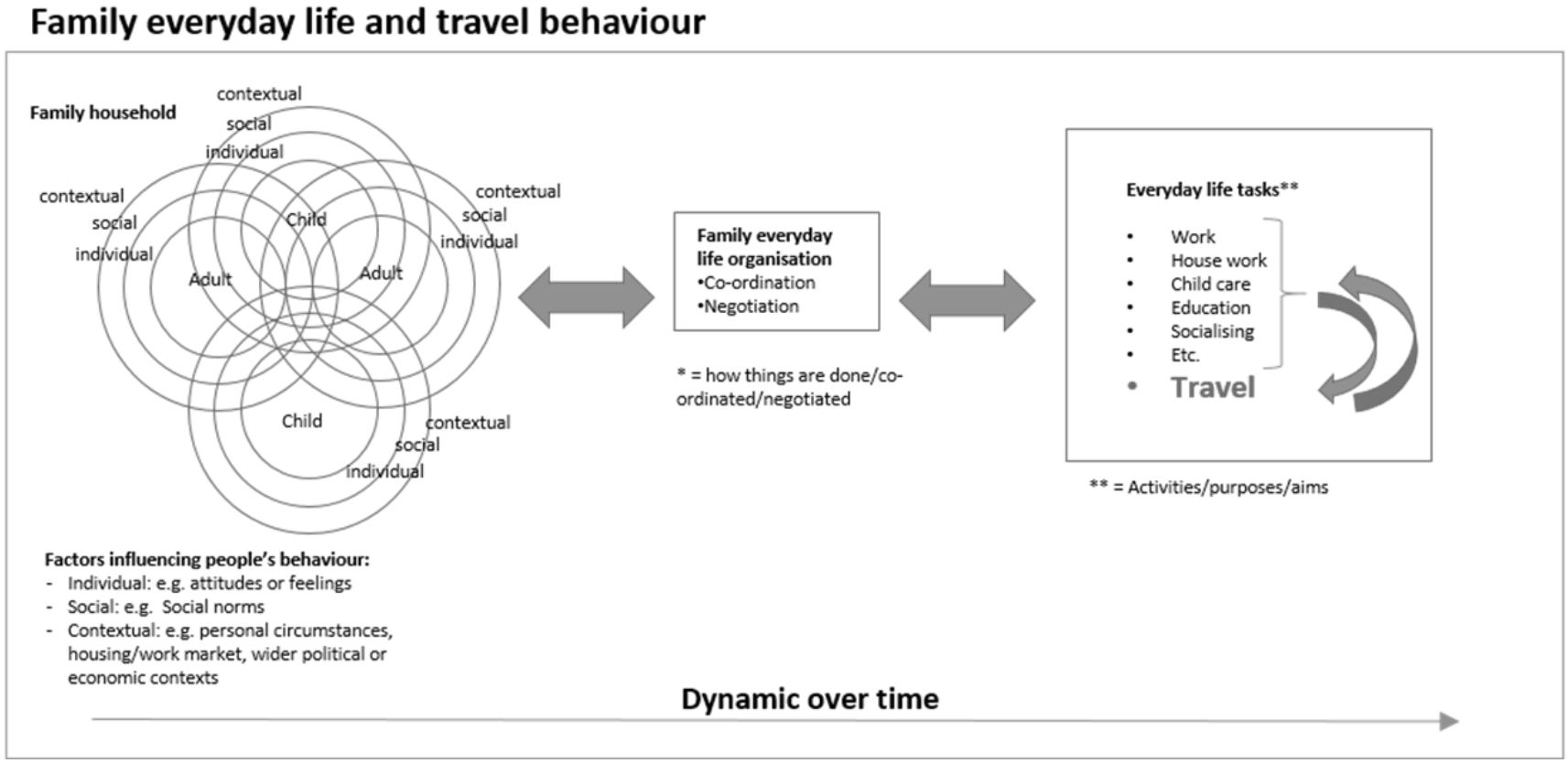



**Figure 1**

***Conceptualising family everyday life and travel behaviour (author's own)***

# 3 Methodology

This chapter presents the methodology for this study. It introduces the use of theory, i.e. the research approach, as well as the ontological and epistemological perspectives applied. It moves on to the research strategy and design and describes how the geographical study area was chosen. The following sections take the reader through the considerations that were applied when choosing the research methods, before detailing the use of postal survey and in-depth interviews for this study. It finishes with the ethical considerations taken and a section on research quality.

## 3.1 Use of theory

The following sections describe the research approach and the ontological and epistemological orientation of this study. It has been shown that it often is difficult and impractical to adhere to specific ontological and epistemological perspectives when doing empirical research. Bryman (2008:593) highlights work by Platt (1986) that investigated social science studies and found that most in fact referred to a mix of fragments of theories, often retrofitted after the empirical work had been undertaken. This highlights how ontological and epistemological positions cannot necessarily be followed through in a consequent way, and are therefore often best considered as rough guidelines or helpful tools for the research process, e.g. by positioning one's work in relation to previous studies in the field and their theoretical approaches, or as a tool to interpret parts of results (Robson, 2011:66).

### Research approach

The aim of this study was to better understand family travel behaviour, using an everyday life perspective. As shown in the literature review, this is an under-researched topic. The research gap and research questions suggested the need for an exploratory, in-depth qualitative study. I therefore used an inductive rather than deductive research approach. This means that, while some broad research questions were used as a framework, no defined hypotheses were tested. I inevitably had some background knowledge and preconceptions about the research topic, which were evident before the empirical work phase, influencing how I planned the field work, e.g. chose a sample - as also pointed out by Popper (1961; in Blaikie 1993:142). I also

read the relevant literature in the field. However, I only applied this knowledge more consciously after the first round of analysis of the first round of interviews.

**Ontological perspective**

The ontological perspective that I applied has elements of both objectivism and constructionism. While it is acknowledged that individuals have their own changing perceptions and opinions about the world, objectivism assumes that these can be studied and that there also exist at least some objective facts and structures which influence individuals' perceptions and behaviour (Bryman, 2008:18). For this study, these were, for example, the geographical locations of where people lived and the destinations they travelled to, public transport accessibility of areas, availability and characteristics of employment, property and school places, other contextual factors which were established through the interviews, as well as data from the survey and secondary data.

Constructionism on the other hand emphasises that social phenomena and meanings are 'constructed' by actors, are subjective and continuously evolving (Bryman, 2008:19). For this study I researched people's subjective attitudes and feelings about travel behaviour and found that these are influential in shaping travel behaviour. The relatively unstructured in-depth interviews that were the main research method used, allowed for the social construction of the interviews and the resulting co-produced knowledge through the interviewee's and interviewer's interaction.

**Epistemological perspective**

I assumed that there is some objective reality (for example that there are some structures that shape social phenomena), while also acknowledging that any reality in the social world is mediated and therefore also subjective. One epistemological approach that I could apply to this study was therefore critical realism. This approach is concerned with the idea that "we will only be able to understand – and so change – the social world if we identify the structures at work that generate those events and discourses" (Bhaskar, 1989:2; in Bryman, 2008:14). Those structures are referred to as mechanisms. While accepting that social reality is constantly both produced and reproduced by members of society - including in the case of this study by the interviewees, but also by myself as the researcher interpreting the research data -

mechanisms can be seen as a reality which exists on a separate level from the immediate social reproduction of the events studied, and can also sometimes explain social behaviour. Whether events develop according to the proposed mechanisms depends in each case on how favourable the specific circumstances are (Harré, 1970; in Blaikie 1993:59). Critical realism seeks explanations of social phenomena by studying them, however, it also acknowledges that the conceptualisations that result are still only an approximate representation of reality (Bryman, 2008:14-15).

### 3.2 Research strategy and design

The conceptual framework and theoretical perspectives guide the type of evidence that is collected, how it is collected, and how it is analysed. The main issue that the empirical research of this study aimed to look at was how family travel behaviour is related to their overall everyday life. This included the need to find out about the nature of travel behaviour of families, how family members shared everyday life and related tasks among each other, and how individual, social and contextual factors influenced the family's everyday life, including their travel behaviour. Furthermore, the dynamics and changes over time of family travel behaviour were researched. I expected to find patterns and tendencies which are not necessarily generalisable, but which might be more or less common among the families studied.

Pratt (1996:1372) suggested how people's everyday lives can be better researched, taking into account the interaction of different types of elements such as subjective impressions, contexts and mediating institutions: "One possible model for such work might involve the construction of life-histories of individuals within households. These individual accounts would have to be supplemented, and contextualised, by detailed analyses of the relevant institutions and their local rules, conventions and practices." Also Chatterjee and Scheiner advocated for a biographical approach to travel behaviour research, pointing out the influence of life phases and life events (Chatterjee and Scheiner, 2015).

Therefore, to support the aims of this study, I decided to closely focus on family households and the individuals who are part of them, and their everyday lives. Studying them, I expected evidence about family travel behaviour as embedded in their everyday life co-ordination to emerge, as well as relevant contexts and

institutions to be reflected. The perspective I took was led by the subjective narratives of individuals, i.e. from a micro-level, however also taking in the 'bigger picture' from this perspective.

**Research strategy**

There is no simple distinction between 'qualitative' and 'quantitative' research. Each type of research strategy has advantages over the other and will be appropriate for researching different research questions. They are often complementary and can also be combined (Silverman, 2010). However, for the aims of this study a mainly quantitative approach would have been less useful than a qualitative approach. Quantitative approaches often use surveys with many people, in order to statistically analyse the data and arrive at standardisations and systematic comparison (Silverman, 2010). Quantitative research collects and analyses data, using strict categories and quantifiable concepts only. In travel behaviour research such approaches are for example used to count people's movements and map out travel routes and transport modes used. They might look at clearly measurable influencing factors such as family income, access to vehicles, and distances to potential destinations.

To capture the complexity of travel behaviour of individuals - or groups of individuals, such as families - and its relation to everyday life and other contexts, qualitative approaches are often better suited. These look at individual cases and phenomena in-depth (Silverman, 2010), e.g. people's individual travel behaviour and factors influencing it. They may also consider how people make sense of their travel behaviour and what it means to them, by analysing what they say about it. I therefore chose a qualitative research strategy for this study, to explore the complexity and idiosyncrasies of families' everyday life, as well as aspects that might be evident across families. As a complement to this, I collected some quantitative data, which gave information on the personal background and travel behaviour of families in the study area in general. However, this information mainly served to enhance the qualitative picture and cannot be considered a quantitative study element in itself.

**Research design**

As evident from existing research, travel behaviour is influenced by a complex mix of factors, which is more likely to be captured using a wider everyday life perspective than a narrow focus on travel behaviour. An everyday perspective was also likely to see travel behaviour in its entirety, including the use of all kinds of transport modes and journeys and their relationships. I also decided to study several members of a family wherever possible in order to look at dynamics between individuals and within the family. Furthermore, as I assumed that any elements influencing travel behaviour were dynamic, I decided to study changes over time. I used a case study research design to create such a rich, situated picture.

A focus on cases maintains a holistic perspective on the complexity of cases – e.g. in real life situations – and on how elements are interconnected (e.g. Yin and Davis, 2007; in Yin, 2009:18). Case studies can also incorporate data and evidence from different sources (Yin 2009:11), e.g. interview accounts, survey data or secondary data.

As much as a case study research design can generate rich data and explore a phenomenon, it still focuses on specific cases which means that results from such a study are not generalisable to a larger population. However, any case, be it exemplifying or unusual, can contribute to the study of a phenomenon when seen as part of a body of research about a topic (Bryman, 2008:55-57).

A case can have any of a number of different possible units of analysis, e.g. an individual, a group, an organisation, a community, a country or a policy, and its choice is led by the research questions posed (Yin, 2009:29-33). For this study, the unit of analysis I chose is the family household, and I studied a number of family households in a defined study area.

**Choice of study area**

Prompted by the study of Thornton et al. (2011) which proposed a large potential for more sustainable travel behaviour among 'educated, suburban families', the aim of this study was to investigate travel behaviour of families in an outer London suburb with a variety of income and education levels. The criteria for a suitable study area were a large family population, good public transport and access to amenities, to

make transport other than by car, i.e. walking, cycling and using public transport - at least in theory - a viable option. The adjacent areas of Aldersbrook, Wanstead, Snaresbrook and South Woodford, in the London Borough of Redbridge in East London fulfil these criteria, and generally conform to the typical or average characteristics of outer London suburbs (see detailed information in Chapter 4).

Several other outer London boroughs would have also been suitable for this study, e.g. Kingston in the Royal Borough of Kingston upon Thames, which is in many of the relevant characteristics similar to Redbridge. However, the cycling rate was much higher in Kingston, compared to the very low rate of cycling in Redbridge. I decided to choose the area in Redbridge, as it had very good transport accessibility, combined with a clearly unsustainable travel behaviour of its residents, and a therefore an assumed high potential for more sustainable travel.

### 3.3 Choice of research methods

I considered several types of research method. Firstly, I could have collected the qualitative data needed for this study through observation, for example using an ethnographic approach. This was impractical however, as observing a sufficient number of families would have exceeded the time resources that I had allocated to the empirical work of this study. Also, recruiting families to agree to being observed in their homes and on their daily travels would potentially have been difficult, as the method might have been perceived as intruding on the family's private sphere. There is also the question of how much the behaviour of observed participants would be influenced by the presence of the researcher (Bryman, 2008:403-405; Robson, 2011:316-317).

I also considered travel diaries as a method. Participants usually note the details of every journey they make in a day, including times, destinations, mode of transport used, purpose, etc. Travel diaries are usually completed for a number of days. I decided not to use travel diaries, for several reasons. Firstly, asking interviewees to prepare a travel diary before the interview might have diminished the participation rate as potential interviewees would have had to commit, not only to spending around an hour at an interview, but also invest time in filling in the diary, potentially spanning a whole week. Secondly, there would have been a risk that participants

forget to fill in the diary regularly and therefore abandon the process or provide inaccurate data when trying to recollect journey patterns.

I considered in-depth qualitative interviews to be the most suitable research method to achieve the aims of the main qualitative part of the study. They enabled me to learn about the diverse range of elements involved in family travel behaviour. In order to build up a comprehensive picture, I also conducted a survey with parents in the study area, for the collection of background data on travel behaviour among families. Secondary data was also used to further describe the study area and population. The two main research methods chosen for this study are outlined in further detail in the following sections. First I explain how the questionnaire survey was administered before detailing how families were recruited and interviewed.

### 3.4 Self-return paper based survey

As the first step of the empirical research for this study, I conducted a self-return paper based survey with parents with children at primary schools in the study area, to learn more about the travel behaviour of families in the study area generally, including which modes of transport they used most often, and the reasons for choosing them.

Conducting a survey generates data about a large number of families. Although a limited statistical analysis of the data was possible (despite a relatively small sample for this study), this was not the main aim of the survey. Its purpose was to assemble background information on family travel in the area and to interrogate it so as to inform subsequent in-depth interviews. The survey was also used to recruit participants for interviews amongst respondents who stated they were willing to take part in further research.

#### Survey population

The survey was conducted with parents/guardians at the family households. They were recruited through schools in the study area. The aim was to recruit a sample of families with children of a variety of ages. Children should however mainly be old enough to be able to engage in different types of travel (e.g. walking and cycling either on adult bikes or independently), while still being potentially affected by a difference between parents' and children's abilities to travel (e.g. younger children

still need to be accompanied, often leading to higher car use). I therefore decided to recruit parents through primary schools in the study area (including any associated school nurseries, which usually only have children aged three years and above).

At the same time, focussing on one educational level only (i.e. on primary schools), instead of also researching families with (often much) older children recruited through secondary schools, and families with mainly pre-school children through nurseries, made it easier to compare families, as it anchored the variety of family backgrounds and travel behaviours within a population of families with children of roughly the same ages. The research population was therefore defined as 'families with at least one child at a primary school in the study area'.

The total number of pupils at all primary schools in the study area was 4414, and the estimated number of family households with children at a primary school in the study area was 3214. The survey was undertaken with 40 per cent of all families in the study area, i.e. the questionnaire was given to 1759 pupils, and reached around 1242 family households (see Table 2 in Section 4.3 – Primary schools in the study area).

The research population included families who did not live in the study area, but had a child at a primary school in the study area. In order to get a more complete picture of the travel behaviour of the families living in the study area, it would have been necessary to also recruit parents with children who lived in the study area, but with the children going to a primary school outside of the study area. However, trying to identify such parents would have exceeded the available resources for this study.

**Administering the survey**

The head teachers of all nine existing primary schools in the study area (five state community schools, three faith schools and one independent, fee-paying school, were contacted by letter explaining the study and asking for permission for the survey questionnaire to be distributed to the parents of their school. After several rounds of follow up e-mails and phone calls, four schools (two community schools, one faith school, and the independent school) agreed to participate in the survey.

The questionnaire, together with a participant information sheet and a return envelope, was handed to the four schools on different dates in November and December 2012. The schools then distributed it to all of the parents, either by putting

it into parents' mail trays or by teachers handing a copy of the survey papers to each child to take home to their parents.

A parent/guardian was asked to fill in the questionnaire (see Appendix 1), from their own perspective, i.e. not answering for the family as a whole, except for some of the questions[3]. The parent/guardian was asked to return the completed questionnaire to their child's school, where they could deposit it in dedicated cardboard boxes. A return period of one week was given; however, I picked up late submissions from schools regularly for several weeks after the deadline. Teachers and staff reminded children and parents regularly to fill in the survey, if they had not done so previously. I did not undertake any organised prompting of parents to remind them to complete the survey; however, several schools reported that their teachers had reminded children to ask their parents to complete the survey had they not done it already.

**Survey questionnaire design**

The aim of the survey was to learn more about the research population's travel behaviour, relatively broadly, in order to also use this information to design the guide for the subsequent in-depth interviews. Travel behaviour topics that were covered in the questionnaire were how people actually travel, including to work and using which modes, if there was any interest in changing their travel behaviour, as well as any factors influencing respondents' travel behaviour.

To this end, the survey questionnaire comprised 18 questions (see Appendix 1). Eight questions related to travel behaviour and 10 questions related to the respondent's socio-economic background. The travel behaviour part of the questionnaire covered owned vehicles, mobility impairments, transport modes' frequency of use, wish for increased use of transport modes, working patterns and distance to work, as well as factors influencing transport mode choice.

Due to the survey not being the main part of the empirical research but mainly to collect background information and to recruit interview participants, the questionnaire was deliberately kept short, covering only one sheet with two pages of

[3] I.e. question 1, 2, 12, 13, 15 and 16 on the number of vehicles in the household, whether any household member has a mobility impairment, level of household income and household composition.

questions. This was also to avoid 'respondent fatigue', i.e. respondents were assumed to be more likely to complete the questionnaire at all (Bryman, 2008:217).

Letting respondents complete the survey themselves takes much less time on the part of the researcher, than conducting the survey face-to-face. This was an appropriate choice for this study, due to limited time resources. Participants, who were later interviewed, reported taking ten minutes or less to complete. Another advantage of the self-administered questionnaire survey is the convenience for the respondent, who can choose to fill in the questionnaire at whatever place and time most suitable. Moreover interviewer effects leading to either respondents giving answers that they feel are socially acceptable, or varying effects due to a number of different interviewers conducting the survey, are avoided (Bryman, 2008:217-219).

However, a disadvantage of self-administered postal questionnaires is that respondents cannot ask questions or clarify items on the questionnaire. They can also read the whole questionnaire before starting to answer the questions, and therefore answers on earlier questions might be influenced by what other questions there are on the questionnaire. With self-administered questionnaires respondents are also more likely to abandon the questionnaire at some point if it is too long, not complete the questionnaire at all, or to miss out questions. Furthermore, there is no certainty about who actually answers the questions, as the researcher is not present (Bryman, 2008:217-219).

Considering both advantages and disadvantages of self-administered postal questionnaire, I found this type of survey to be the most useful for this study, mainly because it didn't take up much time while reaching a large number of potential participants.

As the respondents had to complete the questionnaire themselves, without being able to clarify issues with me, I had to design the questionnaire for respondents to be able to navigate with ease through the questions without overlooking any items, as well as for questions to be understood easily and clearly to avoid misunderstandings (Bryman, 2008:217).

**Final survey sample**

The questionnaire was handed out to around 1242 family households. The final sample was made up of 198 family households, i.e. parents who responded. The response rate was between 13 and 20 per cent depending on school (i.e. 13, 15, 18, or 20 per cent). Due to this relatively low response rate and even lower response rate for some of the questions, the results cannot necessarily be generalised to all families with children at the participating schools. According to Mangione (1995:60-61; in Bryman, 2008:219), response rates of below 50 per cent are considered unacceptable for postal surveys. However, response rates of postal surveys are often low, and many published studies are based on surveys with lower response rates. It can also be argued that results from surveys with lower response rates can still be used if their shortcomings are acknowledged and pointed out (Bryman, 2008:220).

Furthermore, the final sample of 'families with at least one child at a primary school in the study area' who took part in interviews (discussed in the next section) was, in several ways, self-selecting. First, four of the nine schools elected to participate effectively provided access to only a sub-sample of possible family households in the area. Second, parents/guardians of children at these four schools participated voluntarily in completing and returning the survey questionnaires, which meant that some families may have been less likely to participate. Third, every family that elected to participate could freely choose which adult in the household (if there were more than one) filled in the questionnaire. This led to a self-selected sample of mainly women.

**Data analysis**

The responses were processed and analysed using the statistical analysis software package IBM SPSS Statistics 25. I performed basic descriptive statistics including frequencies of answers. However, no extensive statistical analysis was conducted, as this was not an objective of this survey.

### 3.5 Qualitative, in-depth interviews

From the 198 respondents of the survey with all parents of four primary schools (and attached nurseries where applicable) in the study area, 19 families agreed to take part in further study, all of which were recruited for in-depth interviews. Initial

interviews took place between February and April 2013 with one parent of each of the nineteen families. Of these families, twelve agreed to take part in a second round of interviews to investigate travel behaviour change – the rationale for two interviews is explained in Section 'Interviewing individuals or couples, together or apart?' on page 80. The second interviews took place between September 2014 and July 2015. The period between first and second interviews ranged between 18 and 27 months, and was on average two years. Second interviews involved the same eleven parents who were interviewed on their own during the first round of interviews but for four families, this time their partner was present. For the remaining family, the initial parent was not present, and instead, the other partner took part in the second interview (see details of the interviewee sample in Table 5, in Section 4.6.1 - Characteristics and diversity of the interview sample).

Interview appointments offered to participants covered daytime and evenings, in the week and at weekends. Interviews took anything between 45 and 90 minutes, but most took on average, one hour. Interviews were semi-structured, giving interviewees some freedom to choose issues to talk about within the wider topics of interviewees' everyday family lives and everyday travel.

For the purpose of this study, interviews had to evoke detailed, subjective accounts from interviewees. As opposed to quantitative surveys, interviews can generate rich, qualitative data about people's lives (Robson, 2011:280). As mentioned previously, ethnographic observation studies also result in rich, qualitative data, however, are very resource-intensive. Using interviews meant that a larger number of families could be studied within the resources available.

Kvale (1996) described several typical characteristics of qualitative interviews. Such interviews are concerned with the interviewees' everyday lives. Interviewees are encouraged to talk about specific events and experiences. The aim is to document interviewees' relatively un-interpreted descriptions. This suited this study as the interview could be used to cover a number of different issues around people's everyday lives. These descriptions were eventually interpreted mainly during the analysis of the interviews.

According to Kvale (1996) the qualitative interviewer is also interested in understanding about meanings to the interviewee of things talked about at the

interview, i.e. the interview covers a factual and a meaning level. While the study researched some facts, to understand why people have a certain travel behaviour, I was also able to learn about what these behaviours meant to interviewees.

Furthermore, the interviewer tries to be as open-minded to new and unexpected phenomena as possible, be aware of his or her presuppositions and try not to let these steer the interview (Kvale 1996). This applies to this study, too, as it used an inductive research approach. The focus of the use of qualitative interviews in this study was therefore on letting the interviewees steer the interview as much as possible.

Also, the interviewer has to be aware that what people talk about is their own, processed account of events, experiences or ideas as they make sense to the interviewee (see also the section on 'Narratives and narrative inquiry: How people make sense of travel behaviour'). Ambiguities are often part of the stories that interviewees tell (Kvale, 1996), and the interview, looked at as a whole, might seem incoherent in some aspects. These ambiguities might also reflect objective contradictions in the interviewee's life world, pointing to underlying wider structures and mechanisms, which were also aimed to be discovered during the study. I therefore tried to acknowledge and where possible clarify such ambiguities during the interviews.

Finally, the interviewer needs to be aware that the interview is a conversation between two people and that the interviewer's background, presence and participation in the interview influence the outcome to some extent (Kvale, 1996:29-36). This implies that the interview is a collaboration of interviewer and interviewee to develop narrative accounts over spans of the interview, which are meaningful to the interviewee (Mishler, 1986 in Riessman, 2008:23). Although I tried to keep my influence as the interviewer to a minimum, I acknowledge and document it in the section 'Position and role of researcher and interviewer'.

**In-depth interviews to research everyday lives**

It is questionable whether interviews are at all appropriate to research people's everyday lives, as these are made up of often mundane practices, including travel behaviour. The researcher doesn't usually witness any practices during the course of

an interview, but listens to the subjective accounts of the interviewees. Still, such accounts are always at least partly a reflection of actual behaviours (Butler, Parkhill and Pidgeon, 2014:6-7). Somers (1994:684) also points out that narratives (what people talk about) and social action constitute each other, none of them being a priori. Ontological narratives for example constitute and are constituted by action. Therefore, interview accounts reflect what people do in practice (Hollway and Jefferson, 2013:30-32) and individual narratives also reflect wider societal narratives and social norms.

Furthermore, many things that people do in everyday life are routine actions, which are often done subconsciously. Interviewees might not be able to express what they actually do, might not give an accurate account of what happened in practice (Hitchings, 2012), or they might express ambiguities (Guell et al., 2012). From his own empirical research, Hitchings found however, that people often do reflect on their actions and that interviews therefore can generate relevant accounts about what people actually do. He suggested helpful tools that can be used during the interview to increase the quality of these accounts, for example specifically asking interviewees to reflect on the obvious, and asking interviewees whether they could do things differently (giving concrete alternatives), which leads to them being able to better define and explain why and how they do things as they do. Therefore, while interview accounts are highly subjective and lack direct observations of what people actually do, they can still be useful in researching everyday life (Hitchings, 2012).

To document some of the dynamics and changes in families' travel behaviour over time, I decided to conduct more than one interview where possible. As the available time resources were limited, two interviews per family were planned. A second interview not only facilitated a view on changes over time, but also gave an opportunity to interview partners together or individually (for two parent families), which could give insight into dynamics, negotiations and potential frictions between family members (see the section on 'Interviewing individuals or couples, together or apart?'). It also revealed different viewpoints of family members on issues of the family's everyday life.

A second interview also gave the opportunity to clarify any points from the first interview. Furthermore, conclusions from the analysis of the first interview could be

discussed with interviewees, and for the second interview the focus could be put on issues that had emerged as important from the analysis of the first round of interviews. For example, intentions for the increased use of sustainable modes of transport, documented in the first interview, could be revisited at the second interview to see whether these were implemented in practice.

The interview guide for the second interview was informed by the results of the analysis of the first round of interviews, however, remained largely the same. There was a slightly stronger focus on travel behaviour and any potential for change towards more sustainable patterns, as well as on changes in the families' everyday lives in general since the previous interview. However, the same principle of conducting a semi-structured to relatively unstructured interview was applied.

**Narratives and narrative inquiry: How people make sense of travel behaviour**

It is important to understand when using interviews as a research method that people who talk about their experiences or behaviours present a processed version of them, i.e. a story. This story makes sense to them, and is intended to make sense to others they tell it to (MacIntyre, 1981:199; in Miller, 2005:9). Stories are "the primary form by which human experiences are made meaningful (…), it organises human experiences into temporally meaningful episodes" (Polkinghorne 1988:1; in Hollway and Jefferson 2013:29). The purpose is for people to maintain 'ontological security' in their lives, which is more vulnerable in late modern society characterised by uncertainty (Giddens, 1991). A narrative inquiry approach to interviewing takes into account these functions of stories, and was found suitable for this study.

In the process of story production and expression, people are influenced by their own past experiences, future intentions and personal values, as well as by social norms and culturally and socially accepted 'meta-narratives' about how things 'should be' (Somers, 1994; in Miller, 2005:8; Freudendal-Pedersen, 2009 (see also section 2.4.2 on 'Social factors influencing travel behaviour'). Using such narratives to justify one's behaviour is often the easiest option. Saying anything that diverges from these narratives can be challenging, unless a strong 'counter-narrative' can be produced (e.g. Miller, 2005).

As mentioned previously, interviewees' statements and narratives can be ambiguous. Interviews can reveal contradictions in people's narratives, as these often include both some of their personal, as well as the socially more widely accepted narratives. To better understand people's stories, the researcher therefore has to look at both individual intentions as well as the social context in which people live (Miller, 2005).

The making of narratives is an ongoing process - stories are often revised as time goes by, or as the context they are told in changes. Interviewees might offer a different version of their story when interviewed again, and say things which they felt they hadn't been able to talk about previously. This was often found by Miller in her research about the narratives that mothers gave about their experience of the first weeks after their first child was born: During the experience, many mothers told stories about how well they coped and how happy they were, while a few months later they admitted to having struggled with the experience of being a new mother (Miller, 2005). The adjustment of narratives can also occur during the interview, as interviewees process the interview topics, and this process then triggers new insights for the interviewee (and, if shared, for the interviewer) on the topics discussed. The interview experience as a whole might also lead to interviewees reflecting on the topics after the interview, which might lead to the further revision of stories and potentially behaviour. It can therefore be useful to interview people twice or several times.

In summary, there are factors that influence the production of the story told, e.g. any common socially accepted norms and narratives, as well as contextual factors. These can (intentionally or unintentionally) overshadow aspects of experiences of interviewees that are not coherent with such narratives, or clash with incoherencies apparent in the interviewees account. Stories can also change over time. The focus on the production and analysis of longer stretches of interview accounts, as is the aim with a narrative inquiry approach, also means that the role of the interviewer in this process can be more significant than with other research approaches, as there is more scope for the researcher's subjectivity to have an influence (Riessman, 2008:21). All of these factors have to be acknowledged when using a narrative inquiry approach.

With so many elements influencing the production of stories or narratives which form interview accounts, the reliability and validity of eliciting narratives as a research method could be questioned. However, while stories and interview accounts are complex and often ambiguous, Hollway and Jefferson (2013:30-32) point out that:

> Stories are obviously not providing a transparent account through which we learn truths[;] story-telling stays closer to actual life-events than methods that elicit explanations.

Bauer (1996; in Hollway and Jefferson, 2013:32) found that narratives also often contain many references to actual events in place and time. Narrative inquiry was therefore the chosen approach to interviewing for this study.

Another reason for employing narrative inquiry for this study was that it is a case-centred approach to research. It aims to identify narratives specific to individuals or groups, and also preserve these to some extent throughout the analysis stage (Mishler, 1996; in Riessman 2008:11). As it focuses on cases and the specific settings in which these cases take place, it cannot be used for wider generalisation. However, the knowledge gained from each case can still be interpreted alongside and in comparison with other cases, to identify common issues. The aim is to see the bigger picture, i.e. presenting narratives within their contexts. As Bruner (1987; in Riessman, 2008:10) suggested, individuals' narratives are always related or ideally fit in with society's 'deep structures' and associated narratives and therefore identifying individuals' narratives tells about this bigger picture, which in turn influences each family's narratives.

In order to support the validity and reliability of the interview accounts, I aimed to clarify issues with the interviewees throughout the interviews. I also supplied the interview transcripts for validation to those interviewees who requested them (see also the section on 'Research quality' below).

**Interview process**

For this study, in line with the chosen narrative inquiry approach, I intended to let interviewees talk freely about their lives, and to capture stories and narratives. In order to achieve this, I was open to let the interviewee steer the interview to some extent and follow down their trails, listening 'in an emotionally attentive and engaged

way', while supporting the construction of the stories by clarifying and stimulating the interviewee's memory (Riessman, 2008:24-27).

At the same time I had a list of specific questions around individual, social, but especially contextual factors influencing travel behaviour which I intended to ask wherever suitable during the interview. The broad topics I aimed to cover, included everyday travel and life organisation, journeys and transport modes used, choice of living area and children's schools as well as any anticipated life changes in the future (see the full interview guide in Appendix 2). A semi-structured interview type was therefore chosen as it gave interviewees the opportunity to speak freely about topics, some of which they chose themselves, while also letting me steer the interview in some parts (Bryman, 2008:438).

During the interview, I gave the interviewee time to spontaneously come up with discussion topics, listened, perhaps repeated what the interviewee had said, and used open and non-leading questions that interviewees could answer in a number of different ways. Also, to start the interviewee on freely talking about their experiences, the first question of the interview was very open ("Tell me about a typical day in the week – what do you do and where do you go?"). When the discussion about an issue was finished, I let the interviewee guide me which issue they wanted to talk about next, or picked a topic off my interview schedule myself, until all main topics were covered.

The last question of the interview was also the same for all interviewees: "If there was anything that would improve your everyday life what would that be?" This question was deliberately worded quite openly in order to give interviewees another opportunity to choose the type of issue they wanted to talk about. To finish the interview, I checked some background information such as the exact ages of interviewee and partners (only ranges were asked for in the survey), sex of children, job titles and working patterns of parents and car makes.

The openness to interviewees taking the lead in the interview, together with a consideration of a range of topics relating to interviewees' everyday lives, as well as past experiences and future aspirations made the inquiry approach to some extent similar to that of Jarvis, Pratt and Cheng-Chong Wu (2001) which they called a 'biographical approach'. They looked at different everyday life aspects, including a

typical day, using a combination of semi-structured interviews, work histories, chronologies of 'milestone' events and diaries**.**

**Interviewing individuals or couples, together or apart?**

In order to research families' travel behaviour, all family members (including children), some family members (e.g. the parents), or just one family member (e.g. one parent) can be interviewed. If several family members take part, they can be interviewed individually or together. It was decided to interview only parents. Although children's perspectives on everyday life and travelling might be interesting, it was assumed that parents were the main decision makers regarding everyday life and travel in households, and therefore priority was given to interviewing them. Interviewing all family members would have exceeded the available time resources and it would potentially have been more intrusive to families, especially if aiming to interview younger children by themselves.

Interviewing partners can result in interesting data. Family travel behaviour is embedded in families' everyday life, with some events only being experienced by individual family members, and others being experienced jointly. Everyday tasks and actions also have to be co-ordinated among the different family members. This co-ordination process is often a routine, almost subconscious process and often not talked about by interviewees. "Individual preferences are frequently masked by capitulation to external events, limited options or 'given' circumstances" (Jarvis, Pratt and Cheng-Chong Wu, 2001: 85). However, how individual members of the household make sense of and retell their jointly experienced or co-ordinated actions, might differ significantly, especially when reflecting on events that are "unintended or unacknowledged" (Giddens, 1984:5, in Jarvis, Pratt and Cheng-Chong Wu, 2001:89-90). Each of the partners has their own, potentially varying accounts of their family's everyday life. If partners are also interviewed together, they can challenge each other, which can expose dynamics, negotiations and conflicts within the family (Valentine, 1999:67-68). Richer accounts might therefore be generated if the study documents family members' joint stories.

However there are cases where interviewing partners separately might be the better solution. Some couples produce pre-conceived stories to present themselves positively. Also, interviewing partners apart avoids situations where one partner

dominates or takes over the conversation. Therefore interviewing couples separately might give individuals the opportunity to talk more freely about their family life, and by doing so might also give useful insights into family dynamics or even reveal family secrets (Valentine, 1999:70-71). Another benefit of interviewing the same person again, was that the accounts of the first and second interview could be compared more directly, as they were both given by the same person.

For the first interview, I decided to interview one parent only. I assumed that the response rate would be higher if interested respondents of the survey were asked to participate by themselves, instead of having to co-ordinate one interview appointment with both parents. Asking for individual interviews would also avoid the situation where single parents might feel discriminated against, or feel that their relationship status was highlighted in any way. For the second interviews, I asked the original interviewees who lived with a partner, whether I could do the second interview with both of them present. However, I also gave them the option of either attending by themselves again, or letting their partner do the interview by themselves. This measure was taken to retain as many original interviewees as possible for the second interview. If it was not possible to interview both partners, or if there was only one adult in the household, the second interview would be conducted with the same person who was interviewed at the first round.

**Position and role of the interviewer**

As mentioned previously, less structured, qualitative interviews are always a co-produced by the interviewee and the interviewer. The interviewer might aim to act neutrally and let the interviewee steer the conversation, however there are always potential influences of the interviewer, which he or she needs to be aware of. Also, during the interview and especially analysis, the interviewer's knowledge and opinions influence the analysis. The interviewer's position therefore also has some influence on the interview outcomes, even if the aim is to approach the interview objectively, or to enter the interview situation and analysis without pre-conceptions (Kvale, 1996:35-36).

In the case of this study, my background had some broad similarities with the background of most interviewees (e.g. broadly belonging to a similar (middle) class, and holding a degree qualification). Like the majority of interviewees, I am female and

of similar age to the interviewees, live in East London (although in a more urban part), and was at the time of the first round of interviews, pregnant with my first child, i.e. becoming a parent myself. All of these attributes potentially helped me build rapport and gain trust with participants.

I presented myself as a PhD student and was therefore probably considered an expert on the topic of travel behaviour. On the other hand, while not hiding the fact that I had studied the research on family travel behaviour, I acknowledged that the interviewees were the actual practical experts on (especially their own) families' travel behaviour, and everyday life with children more generally. Although I was familiar with East London to some extent, I asked questions about what it was like to live in the study area. This further contributed to the interviewees usually feeling at ease in the interview situation.

However, while having a similar background and being familiar with living in London, I had grown up in a different country (Germany) and was therefore sometimes not as familiar practically with some of the basic issues discussed in the interview, for example those around growing up and going to school in the UK. I admitted this lack of knowledge during the interview and asked for clarifications of issues where necessary. This again made interviewees feel confident in their knowledge, and might have contributed to the general openness with which interviewees were talking about their everyday lives.

Overall, I tried to make the interviewees feel comfortable and give them the feeling of being the experts on their everyday life and travel behaviour, in order for them to talk as freely and openly as possible. I also tried to keep myself and my knowledge and opinions, in the background, i.e. by keeping my own talking to a minimum and being a good listener. There were probably other influences, originating for example from the interview setting or the daily 'form' or mood of the participants, such as some interviews being shorter and less open than others, and any such impressions were noted down after the interview and kept in mind during the analysis. However, it is impossible to take into account all possible influences of myself as the interviewer, and therefore it has to be acknowledged, that any interview account documents a unique conversation between two individuals. Some of the variation can potentially be balanced by doing two interviews with the same family or interviewee,

i.e. two interviews could yield a richer, more balanced picture of families' everyday lives.

**Interviewee sample**

The interviewees were a convenience sample, as only and all survey respondents who volunteered to be interviewed were interviewed. Further selection according to specified characteristics among interested survey respondents would have decreased the number of interviews to fewer than intended. No wider generalisations can be made from the research results when using a convenience sample (Bryman, 2008:183), however this wasn't the aim of the study. The interviews were intended to be illustrative of a wide variety of different family cases, including a variety of socio-economic backgrounds of interviewees, household structures (e.g. single or couple parents, different numbers of children and children's ages), working patterns, home locations, and not least a number of different travel behaviours. At the same time, in order to allow some comparison and limit variety to some extent, interviewees were all parents at one of the four participating primary schools in the study area, i.e. with similarly aged children and living in the same area (with exceptions). A sufficient variety in cases was assumed to show different types of factors and mechanisms that are at work in family travel behaviour, which would be interesting evidence when exploring this group's under-researched travel behaviour. Furthermore, comparisons between cases could be made, and common factors and themes could be identified.

The interviewee sample could have been made even more varied by purposefully recruiting more cases according to specific characteristics, however this was not practical due to time restraints, and wasn't deemed necessary as the sample was sufficiently diverse.

**Interview analysis**

The framework for the interview analysis was derived from the conceptual framework for this study. The analysis process needed to take into account and build evidence related to the travel behaviour of the whole family, by looking at the wider everyday life. This way, all the relevant elements and factors influencing the outcome of family travel behaviour would be considered in a more or less inductive process, where the production of the findings is led by the individual interview transcripts, i.e.

by how interviewees make sense of their lives and travel behaviour, while also reflecting on contextual factors such as physical distances and accessibility of amenities. In particular, interviewees' narratives, or where evident, wider 'structural stories', as well as any contradictions or ambiguities, were aimed to be identified and preserved during the analysis.

There are no firm prescriptions for how to analyse qualitative interviews (Bryman, 2008:538), however, a number of approaches can be applied. For this study, a thematic narrative approach to analysis was mainly used, however also a grounded theory methods approach was initially considered, and was implemented as a first phase of analysis (Figure 2). Both approaches are described in detail in the sections following the next section, which presents Kvale's five steps of interview analysis (Kvale, 1996:189-190).

**Interview analysis process**

Interview analysis is a process including several steps. Kvale (1996:189-190) described five steps of interview analysis (see Figure 2 for the interview analysis process applied for this study, linking to Kvale's steps).

Three of Kvale's steps take place before the researcher analyses the interview transcript. These are the descriptions of subjects by the interviewee during the interview, any realisations that an interviewee has during the interview, and any clarifications the interviewer asks the interviewee for at the interview. In this study, some evidence of these three steps can be found in the transcript of the interview. I also wrote a short 'debriefing note' with any ideas that came to my mind straight after leaving after each interview. These were often about the interview setting and atmosphere, such as whether interviewees seemed in a hurry or were short in their answers, but also described impressions of the interviewee's personal traits, such as seeming risk averse or anxious. Any interesting comments made by interviewees after the recording device had been turned off, were also noted. These debriefing notes added valuable information to the interview experience and transcripts.

## Figure 2

### *Interview analysis process*

**First round of 19 interviews**

1) **Descriptions, reflections and clarifications** by the interviewee during the interview ➔ [*= documented as:*] Interview transcripts **– corresponding to Kvale's Steps 1, 2 and 3**

2) **Reflections** by the interviewer during and after the interview ➔ Notes taken straight after the interview (where applicable**) – roughly corresponding to Kvale's Step 2**
3) **Transcription** of the interviews, including creating paragraphs for each conversation segment ➔ Loosely structured interview transcripts **– corresponding to Kvale's Step 4**
4) **Grounded theory methods coding** of first five interviews, applying free coding ➔ Coded text, six codes and memos in NVivo **– corresponding to Kvale's Step 4**
5) **Thematic narrative analysis**, first trialled on five interviews, then applied to all remaining interviews **– corresponding to Kvale's Step 4**

    a. Reading through a whole interview, then taking notes and organising them, also considering background information (e.g. accessibility of home location and car makes) ➔ Table of notes ('family summaries')
    b. Reading through all family summaries looking at convergence and divergence among families, noting down emerging themes ➔ Notes on emerging themes

**Second round of 12 interviews**

6) **Descriptions, reflections and clarifications** by the interviewee during the interview ➔ Interview transcripts **– corresponding to Kvale's Steps 1, 2 and 3, as part of Kvale's Step 5 (re-interview)**

7) **Reflections** by the interviewer during and after the interview ➔ Notes taken straight after the interview (where applicable) **– corresponding to Kvale's Step 2, as part of Kvale's Step 5 (re-interview)**
8) **Transcription of the interviews – corresponding to Kvale's Step 4, as part of Kvale's Step 5 (re-interview)**

    Note: Transcriptions were made ONLY when interviewees requested a transcript (minority did so) - including creating paragraphs for each conversation segment ➔ Loosely structured interview transcripts

9) **Thematic narrative analysis – corresponding to Kvale's Step 4, as part of Kvale's Step 5 (re-interview)**

    a. For transcribed interviews: Reading through a whole interview transcript, adding on to 'family summaries' ➔ Updated 'family summaries'
    b. Interview without transcript: Audio coding, adding on to 'family summaries' ➔ Updated 'family summaries'
    c. Reading through all family summaries looking again at convergence and divergence among families, adding to emerging themes ➔ Updated notes on emerging themes

**All interviews**

10) **Comparison with survey results – corresponding to Kvale's Step 4**
    The survey results were looked at in the light of the interview results, and notes added ➔ Updated notes on emerging themes

11) **Critical analysis and documentation in the thesis – corresponding to Kvale's Step 4**
    The notes on emerging themes were processed into a part of the final thesis. ➔ Final thesis

The fourth step of interview analysis which Kvale (1996:188-204) described is the analysis of the transcribed interview. Firstly, this step includes the transcription itself, which is a form of structuring of the interview, and the clarification of the material, which can include the omission of superfluous and repetitious sections of text. In this study, all interviewees agreed for their interview to be audio-recorded. I transcribed each interview of the first round of interviews. A transcript included any utterance, i.e. was a word-for-word account of the interview. A transcript was only structured in so far that interviewer and interviewee quotes started at new lines, and paragraphs were created roughly for each new topic, however keeping the chronological order of quotes. The interviews of the second round were not transcribed, but directly analysed while listening to the recordings, so-called audio coding (Wainwright and Russell, 2010) (also see Section 'Thematic narrative analysis', on page 89).

Furthermore, Kvale's fourth step of interview analysis encompasses the analysis proper, which means developing the meaning of the interview, to the interviewees as well as to the interviewer and the research questions. Interviewee accounts are already interpretations – by the interviewee. The researcher then re-interprets these interpretations for the purposes of the research (Riessman 2008). As a fifth step Kvale (1996:188-204) proposes second interviews as additional opportunity for interview analysis (also see the Section 'Thematic narrative analysis', on page 89).

**Grounded theory methods approach to interview analysis**

Using a mainly inductive approach means looking for theory through empirical research - and sometimes iteratively testing that theory while in the process of investigation - as opposed to a deductive approach, where an established theory is tested from the outset. One structured process of applying an inductive approach are grounded theory methods (Glaser and Strauss, 1967). The original theory was written for the use of a positivist approach, however, the basic strategies that are associated with grounded theory, can be used with any epistemological or ontological position (Charmaz, 2014:12).

Data collection, data analysis and theory building stand in close relationship with another and develop through interaction in grounded theory methods (Strauss and Corbin, 1998:12; in Bryman, 2008:541). The process starts with stating a research question, followed by selecting a theoretical sample and collecting data. This data is

analysed by coding, and concepts are highlighted. Through constant comparison during the analysis of the data, identifying resemblances and differences between interviews, categories are worked out that might draw together several concepts and refine them. The process continues until categories are saturated. Then the researcher looks for relationships between categories and might produce hypotheses about these relationships. After that more data is collected and analysed, and knowledge is added to the existing categories and hypotheses. Coding and data collection stop when theoretical saturation has been achieved. Finally, most often, rather than a formal theory, a substantive theory is produced which is not generalisable to other subject areas, but specific to the research group and setting (Bryman, 2008:541-547). The advantage of using grounded theory method based analysis is that it provides a practical, systematic and rigorous method, which can be the basis for theory construction (Charmaz, 2014:1).

There are several criticisms of grounded theory methods. Firstly, it is practically impossible as a researcher to approach data without any theoretical preconceptions about the subject area. Secondly, strict adherence to the coding steps might also over-fragment the interview transcript and result in a loss of context (Coffey and Atkinson 1996; in Bryman, 2008: 549). On the practical side, conducting comprehensive grounded theory coding for analysis can be very time-consuming and might not be possible to achieve within tight time budgets.

I originally decided to apply a grounded theory methods approach to the analysis of interviews, using coding. Coding can simplify, or reduce data as the interviewer engages with the coded data in several analysis steps, to find connections and relationships between categories, to draw conclusions in relation to the conceptual framework and research questions. Coding can also be used to deliberately complicate data by assigning codes to open up the data and interrogate it further, potentially leading to new conceptual frameworks and analysis dimensions. Both coding for data simplification and complication are often part of the same analytical process. Coding can therefore be considered heuristic, i.e. a tool to facilitate engagement with the interview data (Coffey and Atkinson, 1996:26-32).

Strauss and Corbin (1998; in Bryman, 2008:543) offer three types of coding. Firstly the transcripts are treated with open coding, i.e. initial relevant concepts are coded

freely. Properties of such concepts are identified and concepts are grouped into categories. In a further step, axial coding is used, which looks for relationships between categories and considers the wider contexts. Finally, selective coding means identifying the core category which is the central issue, and relating it to all other categories.

I applied an initial round of coding to five of the nineteen interview transcripts, to develop a useful process of analysis that I could then apply to the rest of the interviews (Figure 2). I used QSR NVivo 12 qualitative data analysis software to record codes and coded text. Coding only a small number of interviews as a first step can be a useful process, allowing more time to think about and experiment with ways of coding (Silverman, 2011:62).

I read through every interview transcript and exposed it to open coding, where I highlighted elements such as sentences or parts of them, whenever they appeared relevant or interesting for the research aims, and coded freely with terms that summed up the respective issue. Some codes were derived from the conceptual framework of the study, such as 'travel behaviour' and 'individual factors', while others I invented as the coding proceeded. Codes do not necessarily have to reflect any prior ideas, concepts or frameworks; this however may provide an easier start (Miles and Huberman, 1994; in Coffey and Atkinson, 1996:31-32). Coding is a subjective process and interview data was often ambiguous. I therefore coded it in the way that made intuitively sense to me, and I often coded sections with several codes at the same time.

While I was initially open to using an unlimited number of codes as freely as possible, after coding only very few interviews it became clear that, in order to be able to keep an overview of all the issues that were coded, and to be able to make comparisons between interviews, the number of codes needed to be fairly small. As I acknowledged that coding is a heuristic process (Coffey and Atkinson, 1996:30), I kept the option open of using additional codes where necessary. Eventually only six different codes were used:

- 'Travel behaviour' was used to mark any data relevant to summarise a family's travel behaviour, such as where, when and how family members travelled.

- ‘Individual factors’ was used to code individual factors influencing travel behaviour, including attitudes, opinions as well as aspirations and previous personal life experiences.
- ‘Context’ was used for any contextual factors influencing the family’s travel behaviour. These included any descriptions of events or regular activities including work patterns and times, as well as policy and regulations, or other contextual circumstances, such as references to regular traffic jams occurring in specific locations.
- A fourth code I called ‘Everyday events’, which was used for unplanned everyday events and contingencies, such as bad weather or sudden illness.
- The code ‘Family co-ordination’ was taken from the conceptual framework to use for data that was evidence for any interactions, co-ordination or negotiations between family members with an influence on the family’s travel behaviour. An example would be where one parent would take on child care duties that the other parent could not take on due to, for example, their work pattern.
- Finally, a practical code (‘Vignettes’) was used to mark any interesting text sections that could potentially be used in vignettes when reporting the results of the analysis.

However, it became clear after the first round of coding, that this process fragmented the interviews too much. As Kvale (1996:184) explained: any interview analysis per definition includes a breaking down something into parts or elements. While this process is necessary to increase understanding about the phenomenon under research, it can be useful to take a step back again, to keep in mind the original story or stories that the interviewee was telling. I found this bigger picture to be essential for this study, to be able to see any relationships between different activities of families’ everyday lives, as well as how contexts influence families’ everyday lives, and to be able to compare issues across several families. I also felt that coding was counter-intuitive, as I was trying to be led by the interview accounts, i.e. taking a more inductive approach to analysis. Coding had unintentionally led to an overemphasis on elements as defined in the conceptual framework. Therefore, I abandoned grounded theory methods coding in favour of a thematic narrative approach to analysis (Figure 2). Nevertheless, this first round of grounded theory

methods coding still generated several relevant codes and themes, which informed the following process of analysis.

**Thematic narrative analysis**

Another approach to interview analysis is narrative analysis which aims to identify or, in the case that these are not obvious in the text, reformulate the interviews to create narratives. The aim is to maintain a focus on cases, i.e. individual interviews and their particularities and specific contexts, in order to create a 'fuller picture' (Riessman, 2008:11-13). As opposed to grounded theory methods which use fragments of interviews and emphasise thematic categories, narrative study looks at longer stretches of accounts. Using this approach, individual and larger group or societal narratives, including inconsistencies such as 'counter-narratives', as well as sequences and structural features, can be better preserved (Riessman, 2008:11-13).

Kvale (1996:194) also warned against seeing only fragments after the interview is transcribed and analysed, and recommended the consideration of narrative analysis. He suggested that narratives can be the stories as told by the interviewees, as well as the stories about the research topic that the researcher creates by analysing these stories (Kvale, 1996:185). Riessman (2008) pointed out that while narrative analysis can look at different features of interviews such as speech, dialogue, performance and setting, some researchers only use thematic analysis.

Narratives are mainly "reflections on – not of – the world as it is known" (Denzin, 2000; in Riessman, 2008:188) and are influenced by the subjective views of the interviewer, also when documenting and building narratives during interview analysis.

Therefore, as the main interview analysis method, all interviews of this study underwent a thorough, systematic thematic narrative analysis (Riessman, 2008), the process of which is illustrated in Figure 2 (Interview analysis process). I read each interview once again, now familiarised with some relevant issues that were highlighted through the coding process, and condensed and interpreted each interview as a whole, into the most important points regarding the travel behaviour of each family. During this process, I integrated the results of the survey into the interview analysis, insofar as I was aware of them, e.g. the survey results indicating

the most common travel behaviours in the study area. I also took into account some of the background information of families, i.e. the accessibility of their home location, and the number of cars owned, as well as whether these were larger or smaller cars (as a rough indicator for their efficiency in terms of greenhouse gas emissions).

The result was a family summary for each interview, including what I found to be the most important factors influencing a family's travel behaviour. These summaries were recorded in table form and divided into cells according to headings such as 'personal information', 'work patterns', 'travel mode to work', etc. (for an example see Appendix 3). I then read through all family summaries again and compared them. This resulted in several issues or themes that I identified to be relevant for more than one family's travel behaviour, as well as themes that might only relate to one family but which contributed in their apparent singularity to insights about family travel behaviour in general. After an initial trial of this process on the first five interviews, I found this process to work well and I then applied it to the remaining 14 interview transcripts of the first round of interviews.

At this point, as all first round interviews had been analysed, Kvale (2009) suggests a possible fifth step of interview analysis, the re-interview. The interviewer takes his or her analysis results back to the original interviewee, for him or her to comment on those, which adds another layer of evidence. This step was taken in this study, however not comprehensively. Where it naturally fitted into the conversation, I mentioned some analysis results at the second interview, e.g. I commented on the volume of after-school activities that I found that children generally did, which sometimes triggered a response from the interviewee. However, these instances were not organised and happened only sporadically, and therefore their contribution to the interview analysis was limited.

Then followed the analysis of the second round of interviews which were conducted with either the same interviewee with or without his or her partner present or, in one case with the partner of the original interviewee only. Due to time limitations, and assuming many of the issues identified from the first interviews would come up again, I did not transcribe these second interviews word by word, but analysed them directly at the time of listening to the audio recording, i.e. applied audio coding (Wainwright and Russell, 2010). I listened to the audio file and paused the playback whenever I

wanted to take notes. For both playback and note taking I used the qualitative data analysis software NVivo.

In retrospect, I found the word-by-word transcripts of the interviews and analysis of them overall preferable, as transcripts gave a better overall overview than audio files, i.e. segments of interviews which related to each other could be seen at a glance, and transcripts also enabled me to quickly find segments again. On the other hand, the analysis during the playback of audio files did facilitate comprehensive and rigorous work with the interviews, too, and kept the analysis closer to the interviews in some respect as it transmitted tone and atmosphere better than written transcripts (Wainwright and Russell, 2010).

Again, I considered the whole interview and noted down main issues and drivers of each family's travel behaviour, adding to the existing family summary. Each interview of the second round was then analysed to look at any changes from first to the second interview. These were again added onto the family summaries. I then wrote a condensed summary of each family summary focussing on the family's travel behaviour and the main factors that influenced it, made up of the results of the analysis of both interviews.

The family summaries also included a rough categorisation of whether a family's travel behaviour was 'relatively sustainable' or 'relatively unsustainable'. What is meant here is specifically the environmental sustainability of travel behaviour (see the definition in Section 2.3 'Travel behaviour research: approaches and theories', Chapter 2, pp. 25-27). The evaluation of the environmental sustainability of a family's travel behaviour was not possible beyond such a simple categorisation, because I did not collect exact data on all distances travelled, journey frequency and fuel consumption per car, due to the limited resources of this study. However, data such as whether family members mostly drove or regularly walked and cycled, whether they seemed to travel much or little, what transport mode they used for their most regular journeys as well as whether they used a larger (e.g. Mercedes-Benz estate) or smaller (e.g. Ford Fiesta) car did at least give some indication of the sustainability of a family's travel behaviour.

Another section of the family summary table showed the potential for more sustainable travel behaviour for each family. This was a speculative estimate of

potential, based on the travel behaviour and summary of main influencing factors of the families. For example, in cases where family members had no interest in using any other transport mode than the car, I estimated the potential for more sustainable transport as low, with the family only likely to change their travel behaviour if restrictive regulation would be introduced. Another family might have expressed an interest in using their bicycles more, and for yet another family, contextual factors that were potentially favourable for increased walking, were noted as an indicator for potential for behaviour change.

In addition to family summaries, I assembled facts about each family on which school children attended, children's ages, household income (gross per annum), car makes, work pattern, journey to work, journey to school/nursery, journey to after-school activities ('ASAs') and adult activities (per week), leisure journeys and other notable factors (such as whether interviewees expressed any environmental attitudes) in another table. Using secondary data such as from the route planner in Google Maps, I added information about each household's walking distance to their nearest as well as actually used schools, nearest high street and nearest train stations. Altogether, family summaries, together with the table of family facts, were a good means to get an overview of information about each family including their travel behaviour and their specific main drivers influencing it, representing the bigger picture and parts of it.

Then, I again read through the updated family summaries which included the results from the analysis of both the first and second rounds of interviews, and compared them with each other, also taking into account the family facts. I identified any new or additional common themes and issues, and integrated these with the initial themes and issues that had resulted from the analysis of the first round of interviews. After the analysis of the interviews, I once again looked at the survey results in the light of interview results, in order to identify any relevant relationships. I then structured and presented the overall results in Chapters 5 and 6 (Interview findings).

In summary, I analysed interviews mainly thematically and narratively, compared the results of the interviews with each other, and integrated them. Results reflected the most important influences on travel behaviour, how factors work together, some information about change and some information about family member dynamics.

**Ethical considerations**

Ethical considerations need to be taken throughout the whole research process in order to treat participants fairly and respect and safeguard their dignity, rights and wellbeing. According to Kvale (1996:109-123) there are several issues to take into account when conducting qualitative interview research, for example. Firstly, the research should not only add to scientific knowledge but should ideally also aim to improve the human situation investigated. For this study, for example, if as a result more people in the study area would use more sustainable modes of transport, it might add to the general life quality of the area, as the negative effects of car use such as congestion and pollution might decrease.

Secondly, research participants need to give informed consent to the participation in the study, their confidentiality should be assured and possible consequences of the research to the subjects need to be considered. For both the questionnaire survey and the interviews, parents received a participant information sheet which emphasised that taking part in the study was not obligatory and that their data would be treated confidentially. Only I, and, after data de-identification, potentially my supervisors, saw completed questionnaires and interview transcripts. There weren't any negative consequences associated with the participation in the study, neither during nor after taking part.

I interpreted all of the data and interviews. To ensure that the interpretations weren't offensive to the interviewees, I could have discussed them at the second interview or generally any time after the first interview. Firstly, I chose not to do this with interviewees who hadn't responded to the request to be interviewed again. Also for second interviews, due to a focus on using the limited time that interviewees are typically happy to give (i.e. around one hour), I decided to not discuss the previous interview in depth. However, I made references to the previous interview data whenever suitable. This included reminding interviewees of something they had said in the first interview and asking them whether they still felt the same. All interviewees who requested it were sent a complete interview transcript with the invitation to comment on it. Generally however, as any data supplied by interviewees was eventually used in a de-identified form, using pseudonyms instead of actual names, I assumed that no further verifications would be necessary. I also considered

any adverse consequences for participants through the publication of the research study. Again, as data was de-identified and the research topic not controversial, I assumed that there wasn't a risk for any adverse consequences.

The empirical research element of this study was approved by the University Research Ethics Committee at Oxford Brookes University (UREC Registration No: 120639).

**Research quality**

The main part of the empirical research were the qualitative, in-depth interviews with nineteen family households. Qualitative research is often criticised for not being generalisable, which can also be said about this study. However the evidence from a number of families can still indicate issues and mechanisms that are likely to play a role for other families in similar situations, as well as for family travel behaviour and society in general (Blaikie, 1993:176-179; Kvale, 1996:231-235).

With a small sample of interviewees, i.e. family cases, the validity of the research can be questioned. Qualitative research, as adopted for this study, using interviews and narrative thematic analysis, is always subjective and incomplete (Riessman, 2008:186). Several measures can however help to promote the quality of research by arguing for its trustworthiness.

Firstly, evidence from different sources of data can be compared to see whether they support the same conclusions, i.e. whether there is correspondence (Riessman, 2008:187). In this study, some of the survey results clearly correspond with some of the interview accounts, especially in the area of travel behaviour, e.g. how much people use the car. However, this study is only to a limited extent looking at establishing 'historical truths', i.e. through the survey and interviews, I was interested in finding out approximately how often families travelled, to which destinations and by which modes. More important however were interviewees' accounts subjectively reflecting their everyday lives – resulting in a complex, real life picture of different types of elements which influence travel behaviour, including for example structural stories or social norms, which might not be 'true' in a factual sense but nevertheless play an important role in people's everyday lives.

A second level of correspondence concerns the interpretation of the data by the researcher: do the conclusions correspond with other studies in the field (Riessman, 2008: 188)? As narrative research is often case study centred, it cannot be generalised. However, good case studies do contribute knowledge which can be considered together with other studies to develop the research field further. The quality of case study research can be strengthened by making transparent the processes of methodology choice, empirical research and analysis, as well as emphasising the distinction between interviewee accounts and researcher interpretations of them (Riessman, 2008: 195-198). In this study, all of these aspects were described in detail where possible.

Secondly, research trustworthiness can be indicated by coherence, again, both of the interviewees' accounts and the researcher's interpretation of it. In narrative research however, it has to be acknowledged that there often isn't any coherence in interviewees' accounts; lives – and interviewees' accounts of it – often are messy and fragmented. Presenting these incoherencies increases the trustworthiness of a study (Riessman, 2008: 191). Similarly, the researcher's interpretation of the data is just a subjective interpretation. A coherent interpretation has to acknowledge that there are "co-existent realities – selves and communities that are pulling together and apart at the same time" (Riessman, 2008: 191). A researcher's interpretations can be made more trustworthy by making clear the researcher's position and choices made during the research process which influence the research results (Riessman, 2008:188). This was done in this study by clearly presenting the research process and methodology and the way research conclusions were developed. The positionality of the researcher was considered in the previous section on the 'Position and role of the interviewer', outlining the researcher's background, and in the foreword of the thesis, detailing the motivation for this research.

Thirdly, the validity of narratives can be strengthened if what the researcher tells is persuasive to the research audience. The researcher has to show clearly the links between evidence and theoretical conclusions, include negative cases, and consider alternative conclusions. The interpretations of data in this study and how these came about, are detailed in this thesis. Evidence has to also be presented in context. This includes for example presenting any gaps or contradictions in cases, or making sure

that quotes from interviews are given within their context (Riessman, 2008:191), all of which was also attempted in this study. This was supported by offering to supply the full interview transcript to interviewees with the option for them to comment on it.

**Conclusion**

This chapter outlined how the methodology for this study was chosen and used. To explore the research topic I applied an inductive approach to theory. The research strategy had an emphasis on qualitative methods, and included repeat interviews to gain some insight about changes over time.

The methods that I applied were a self-administered postal questionnaire survey with parents, and as the main method in-depth interviews with 19 parents, with 12 families being interviewed again after two years. For the interviews, I considered whether to interview parents individually or together, as well as the impact of narratives. I did data analysis of survey data using a statistical software package; although I did not do a full statistical analysis, as I ultimately used the data in a more qualitative way as a complement to the interviews. For the analysis of interviews I started out using a grounded theory methods coding, however the main method of analysis finally used was thematic narrative analysis. Furthermore, I did some secondary data analysis to supplement more context for the family cases. I discussed ethical considerations and measures to ensure the ethical use of research methods, as well as research quality issues, at the end of this chapter.

# 4 Setting the scene - Study area and family characteristics

As outlined in the conceptual framework for this study, family travel behaviour is studied in its everyday context, i.e. how travel behaviour is related to people's aims and everyday activities as situated in their social, cultural, economic and physical contexts. In order to introduce the general context for, and basic information about the family cases in this study, this chapter gives details about the study area, as well as characteristics of the population of the postal survey, of survey respondents as well as of the interviewed families, including information about their travel behaviour. This information about context and characteristics of studied families provides the background for the findings of the household interviews, which will be presented in Chapters 5 and 6.

## 4.1 London Borough of Redbridge

Redbridge is an outer London borough situated in the north-east of London (Figures 3 and 4), adjacent to the boroughs of Waltham Forest to the west, Newham to the south-west, Barking and Dagenham to the south-east and Havering to the east. To the north it borders the county of Essex. The Conservative Party held control over the council from the 1960s until 2014, with some periods of no overall control. At the time of writing, the Labour Party had held control of the council since 2014. The borough has a reputation of being a 'leafy' suburb with large amounts of greenspace such as parks and designated greenbelt land (including some of Epping Forest) which makes up around a third of the borough's land (Trust for London, n.d.). Redbridge is furthermore known for its good schools. Overall, Redbridge is a London borough popular with families with children.

## 4.2 The study area: Aldersbrook, Wanstead, Snaresbrook and South Woodford

### Administrative areas, geography and character

The study area is made up of the areas of Aldersbrook, Wanstead, Snaresbrook and South Woodford in the London Borough of Redbridge. At the time of study, Aldersbrook and some of Wanstead constituted Wanstead ward, Snaresbrook and the rest of Wanstead were included in Snaresbrook ward, and South Woodford

belonged in parts to the wards of Church End and Roding respectively (ward boundaries were changed in 2018, however new data was not yet available at the time of writing).

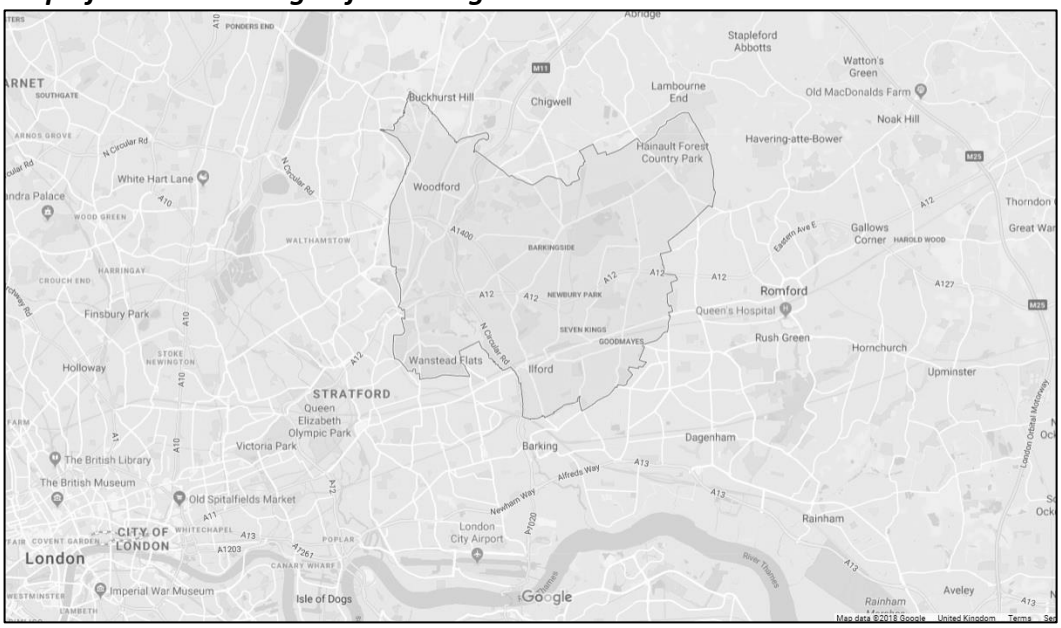
The study area is located in the west of the borough, closest to Central London (Figure 5). This means that it is 11 kilometres north-east from the City of London, where many employers are located. The study area is roughly 5 kilometres long and 2 kilometres wide. The terrain is largely flat.

**Figure 3**
***Map of London boroughs***


Source: London Councils

**Figure 4**

***Map of London Borough of Redbridge***




Source: Google Maps

**Figure 5**

***Map of London Borough of Redbridge – Wards***


Source: London Borough of Redbridge

Within the borough, the study area is clearly delimited by the extensive green spaces of Epping Forest to the west, the North Circular Road (A406) to the north, the Roding Valley Park to the east and the green spaces of Wanstead Flats and the City of London Cemetery to the south. All the green spaces are part of London Green Belt land. The study area is therefore representative of the borough's green character, and has access to many opportunities for walking, cycling and other sports and outdoor activities.

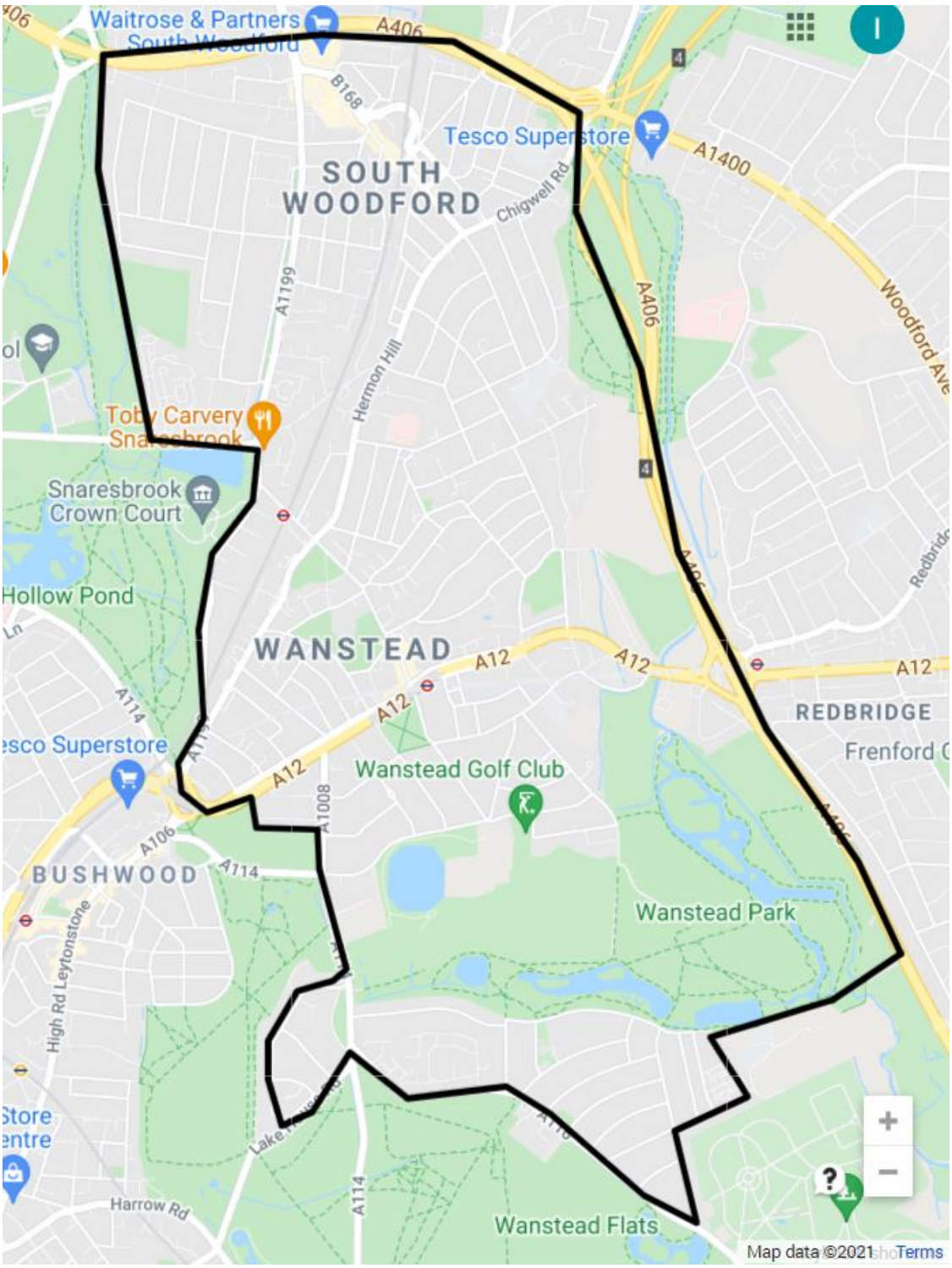
While the areas of Wanstead, Snaresbrook and South Woodford are adjacent to each other, Aldersbrook has a more isolated location, between Wanstead Flats to the south-west, Wanstead Park to the north and north-east and the City of London Cemetery to the south-east. For the purposes of this study, the small residential area west of Blake Hall Road, although not usually referred to as Aldersbrook, was included in the definition of Aldersbrook, as it is adjacent to Aldersbrook and shares similar geographical characteristics.

Aldersbrook is a residential area which has not got its own high street, just a few shops on the main road in the west of the area. It has, however, its own community primary school, which can be reached on foot in at most 15 minutes from anywhere within Aldersbrook. The area's architecture is a well-preserved example of an Edwardian estate which was made a conservation area in 2002 (TFT Cultural Heritage, 2005).

The adjacent areas of Wanstead, Snaresbrook and South Woodford which are located to the north of Wanstead Park, are characterised mainly by Victorian terraced housing. Conservation areas can be found in Wanstead and Snaresbrook and all three areas belong to a number of 'character areas' of the borough. In fact, most of the heritage interest of the borough can be found in the study area (London Borough of Redbridge, 2014). Nearly all parts of the study area therefore offer a high quality environment, both in terms of built environment and green space. Wanstead is often referred to as 'Wanstead village', due to its attractive high street with independent shops and wide pavements, adjacent to a 'village green' and Wanstead Church.

**Figure 6**

***Map of the study area***




Source: Google Maps

**High streets and schools**

There are two high streets in the study area with a large number and variety of independent and chain shops as well as other amenities: Wanstead High Street, which is the biggest town centre in the study area and George Lane in South Woodford. Both high streets are near one or several Underground stations (Wanstead and Snaresbrook stations and South Woodford station respectively). For some interviewees, the nearest high streets were Romford Road in the London Borough of Newham and High Road Leytonstone, in Waltham Forest.

There are six state primary schools distributed around the study area; four are community schools and two are faith schools. There are also two independent primary schools (see Table 2 (Primary schools in the study area) in Section 4.4 (Survey population)).

Each of the primary schools in the study area has a nursery attached which typically takes children for the year before they start reception class, i.e. from three years old. Some of the primary schools offer breakfast and/or after-school activities or clubs. Furthermore, there are around 20 private child minders who serve the study area, 16 private nurseries, as well as five private providers of breakfast and after-school clubs.

There are two secondary schools located in the study area itself, one of which is a mixed state school (Wanstead High School) and the other one a mixed, independent school (Forest School). Families in the study area can also have access to a number of secondary schools which are located outside the study area, several of which can be reached by public transport, e.g. buses and Underground trains.

**Transport and transport policy**

Access to major road and motorways from within the study area is very good, with the North Circular Road around London and onto motorways in all directions, the A12 to Central London and outwards into Essex, and the M11 towards the M25 and northwards towards Cambridge, all running around the study area. The area itself is crossed by two minor 'A' roads from north to south and the A12 from west to east, although the latter runs in a tunnel below street level for part of it, which means that it does not severely physically divide the neighbourhood of Wanstead.

The areas of Wanstead, Snaresbrook and South Woodford are adjacent to each other and the area as a whole can be relatively easily navigated on foot or by bicycle, although there are a few roads which have more traffic. There are three cycle routes which are part of the National Strategic Cycle Network (North-South along the A1199, East-West parallel with the A12, and East-West, crossing Aldersbrook) as well as three local cycle paths. At the time of study, part of the study area had been chosen as a 'cycle hub' within the 'Biking Borough' of Redbridge (as nominated by Transport for London in 2010), with a cycling strategy and Transport for London funding supported measures such as installation of cycle parking, and promotion of cycling, to be implemented in the same period than interviews took place.

As already mentioned, Aldersbrook is separated from Wanstead to the north and any other neighbourhoods in the remaining directions by extensive park and greenspace areas. This means that Aldersbrook is easily accessible on foot within its area, however, it takes around half an hour in each direction, through green spaces or along a busy road, to walk to any of the nearest high streets. The same journeys are around fifteen minutes on a bicycle. However, both walking and cycling through attractive, but often deserted green spaces that are potentially badly lit in the dark, or along busy roads, are not desirable for everyone. Still, the study area is overall easy to walk around in, as the largest distance by foot across Wanstead, Snaresbrook and South Woodford is a 45-minute walk and within Aldersbrook a 20-minute walk.

The study area overall has good public transport services. The London Underground Central Line runs in to Central London within less than half an hour and to the City of London (Liverpool Street Station) within 20 minutes. Three stations of this line, are distributed around the study area (Wanstead, Snaresbrook and South Woodford). The study area also has public transport services, e.g. buses and some Underground and overground train services to and between local outer London town centres. Again, the area of Aldersbrook hasn't got access to an Underground or other train station in walking distance. In order to reach a station residents have to walk, cycle or take a bus, the latter taking less than ten minutes to a station.

The borough's Local Development Framework includes its Core Strategy Development Plan Document (March 2008), setting out the spatial strategy for Redbridge. Its Strategic Policy 6 ('Movement and Transport') aims for a reduction of car

dependence, encouragement of sustainable transport, improvement of air quality as well as a reduction of greenhouse gas emissions. This is aimed to be achieved by locating new development within a hierarchy of town centres and therefore reducing the need to travel. New development is also located within a strategic, integrated transport network, encouraging walking, cycling and the use of public transport. Interchanges and new cycle parking facilities are to be sheltered. (London Borough of Redbridge, 2008).

Further detailed transport strategies are contained in the Local Implementation Plan (April 2011), which translates the London Mayor's Strategy into local transport policy for the borough. Several strategies for Redbridge were published, including the Walking Strategy, the Cycling Strategy, as well as the Road Safety Plan (London Borough of Redbridge, 2011).

### 4.3 Socio-demographic profile of the study area residents

The study area population has a large proportion of relatively affluent families with children. Table 1 (Socio-demographic and other study area statistics) gives an overview of some socio-demographic indicators and other area characteristics for the different wards which the study area partly covers. The respective statistic for the outer London boroughs' average is stated for comparison.

The study area figures are roughly similar to the averages for outer London boroughs for percentages of people with level 4 qualifications and above, crime rates, and Average Public Transport Accessibility scores. Public Transport Accessibility Level (PTAL) scores are used to score London areas' PTAL with values from 0 (very poor) to 6b (excellent).

However, the study area deviates in some aspects from the outer London averages. It is more affluent than the average for outer London boroughs, i.e. has a higher employment rate, lower rate of dependent children in out-of-work households, higher average house prices and higher rate of home-owners. The percentage of Black, Asian and minority ethnic population is lower, the percentage of residents with no qualifications is higher, and the percentage of people who travel by bicycle to work is much lower than the average for outer London.

**Table 1**

***Socio-demographic and other study area statistics - 2015***

| | Wanstead ward | Snaresbrook ward | Church End ward | Roding ward | Average across wards | Outer London |
|---|---|---|---|---|---|---|
| % BAME (Black, Asian and other minority ethnic) population – 2011 | 30 | 30.2 | 26.5 | 37.2 | 31 | 38.6 |
| % Employment rate (16-64) – 2011 | 74.5 | 78.1 | 79.3 | 73.8 | 76 | 68.6 |
| % with Level 4 qualifications and above – 2011 | 45.3 | 50.1 | 46.3 | 37.0 | 45 | 44.9 |
| % with no qualifications – 2011 | 15.2 | 14.9 | 12.3 | 15.9 | 15 | 6.1 |
| % Dependent children (0-18) in out-of-work households - 2013 | 8.9 | 6.2 | 7.3 | 12.4 | 9 | 17.6 |
| Crime rate – 2013/14 | 72.8 | 56.1 | 65.5 | 53.3 | 62 | 67.6 |
| Median house price – 2014 | £460,000 | £360,000 | £299,998 | £340,000 | £365,000 | £318,000 |
| % Households owned – 2011 | 71.5 | 62.1 | 62.2 | 64.1 | 65 | 60 |
| Average Public Transport Accessibility score – 2014 | 2.5 | 3.6 | 2.7 | 2.5 | 2.8 | 3 |
| % travel by bicycle to work – 2011 | 3.2 | 2.4 | 1.9 | 1.6 | 2.3 | 13 |

Source: Greater London Authority (GLA) (n.d.)

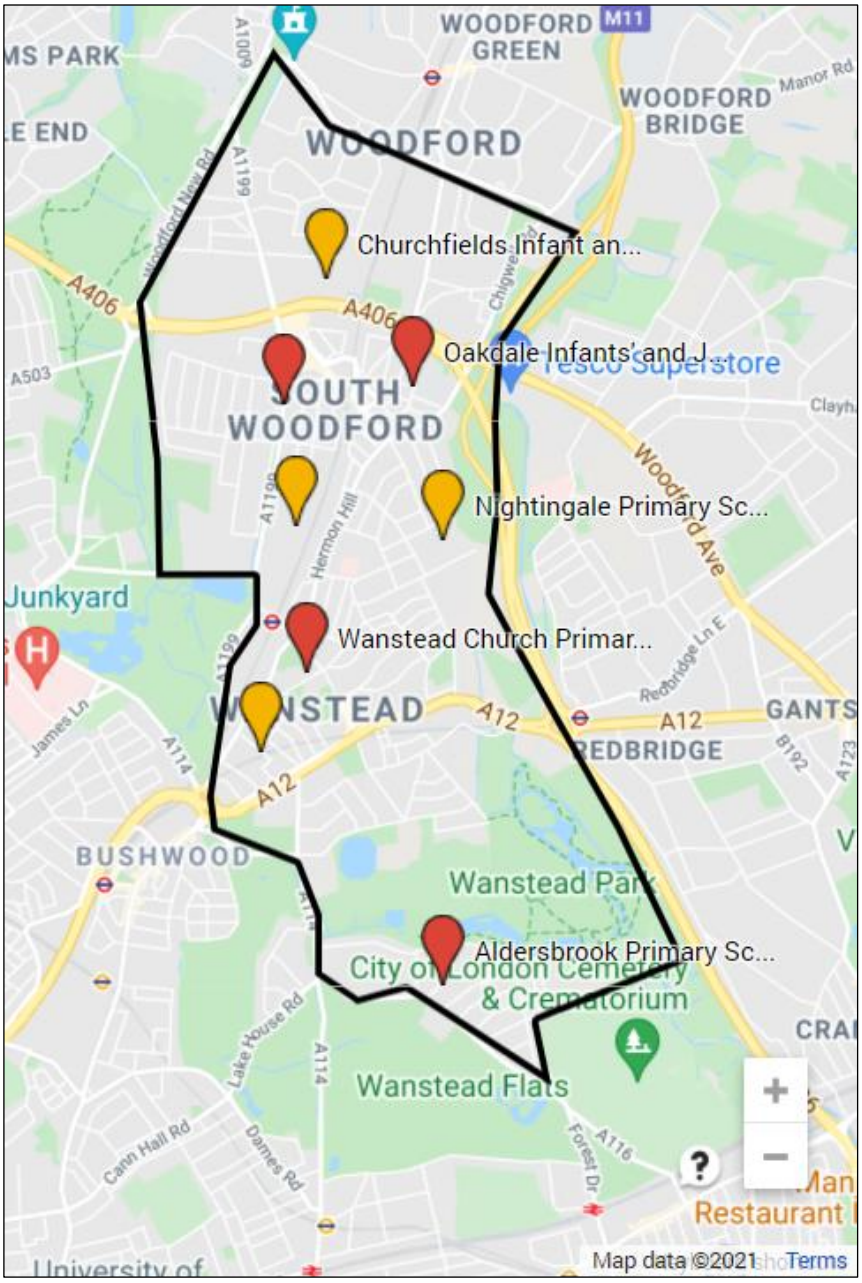
### 4.4 Survey population

The map below (Figure 7 (Primary schools and study participation)) shows the location of all local primary schools within the study area, highlighting those that participated in the survey with a red marker, and those that didn't with a yellow marker. The distribution of participating schools was spread relatively evenly over the geographic area of the study, including schools in each of the study areas sub areas,

i.e. Aldersbrook, Wanstead, Snaresbrook and South Woodford. Furthermore, the participating schools represented different types of schools, i.e. community, faith and independent schools.

**Figure 7**

***Primary schools and study participation***




Source: Google Maps

(Red marker: participating schools;

Yellow marker: non-participating schools)

Table 2 (Primary schools in the study area) gives details about all nine primary schools in the study area, with the participating four schools highlighted. It shows that the survey was distributed to around 40 per cent of all families who have children at primary schools in the study area.

**Table 2**

***Primary schools in the study area***

| Name of school | Area | Type of school | Number of pupils | Number of families | Agreed to participate |
|---|---|---|---|---|---|
| Aldersbrook | Aldersbrook | Community | 682 | Ca. 498 (if average ratio is applied*) | YES |
| Our Lady of Lourdes RC | Wanstead | Faith (RC) | 469 | Ca. 342 (if average ratio is applied) | NO |
| St Joseph's Convent | Wanstead | Faith (RC), Independent | 159 | Ca. 116 (if average ratio is applied) | NO |
| Wanstead Church | Wanstead | Faith (CofE) | 245 | 173 | YES |
| Snaresbrook | Snaresbrook | Community | 488 | Ca. 356 (if average ratio is applied) | NO |
| Snaresbrook Preparatory College | Snaresbrook | Independent | 165 | 125 | YES |
| Nightingale | South Woodford | Community | 684 | Ca. 499 (if average ratio is applied) | NO |
| Oakdale | South Woodford | Community | 667 | 486 | YES |
| Churchfields | South Woodford | Community | 855 | Ca. 624 (if average ratio is applied) | NO |
| | | **TOTAL** | **4414** | **Ca. 3214** | |
| | | **TOTAL Survey** | **1759 (40%)** | **Ca. 1242 (40%)** | |

Data source: Department for Education (n.d.) – Data from 2012.

*= "if average ratio is applied": where for schools only the number of pupils (not family households) was known, an average ratio of pupils to households derived from the schools for which that ratio was known, was applied.

### 4.5 Characteristics of survey respondents

The vast majority of survey respondents were mothers, living with a partner, and two, often both, primary school age children (Table 3, Socio-demographic profile of survey respondents). The median age of the oldest child was 7 and for second children 5

years. Respondents' ethnicity broadly reflected the ethnic background statistics of the local population (as shown in Table 1, Socio-demographic and other study area statistics).

Families had lived in the area for around 9 years on average, which means that they could be expected to be familiar with options of amenities and transport modes in their area.

Half of the respondents had a degree. Respondents were nearly as likely to work full-time or not be in paid employment as working part-time. Most fathers worked full-time. The average distance to work was 8 miles. Nine per cent of both male and female respondents worked from home. There was a spread of levels of household incomes among the respondents, with incomes of single parent households being disproportionally lower than those of partner households.

Table 4 (Travel behaviour of survey respondents) shows characteristics of survey respondents in terms of their travel behaviour. In 6 per cent of families, a family member had impaired mobility. 84 per cent of households owned at least one car, most of those owning one car 'only'. A significant minority of households (16 per cent) didn't own a car. 62 per cent of respondents' families owned one or more bicycles, with more than half of families owning three or more bicycles. Still, 38 per cent of families did not own any bicycles. Hardly any households owned motorcycles.

Driving was, together with walking, the most widely and frequently (for most daily) used mode of transport. Apart from still relatively frequent trips on the London Underground, no other modes of transport including cycling were very much used by respondents. There was interest to use different modes of transport among many respondents (however, the related question in the survey had a fairly low response rate of 63 per cent (125 of 198 total respondents)). Walking was most popular, followed by a wish to take the bus or Underground, and cycle more. One in five, mostly drivers, wished to drive more. These numbers give a picture of respondents who are to some extent car dependent but also open to changes in their travel behaviour.

The picture of car use out of necessity can also be concluded from the reasons given by respondents for their travel mode choice, the five most common ones all being

practical rather than emotional. As respondents were mainly car users, these practical factors can be assumed represent advantages of car use. However, cost, health benefits and for some also the environmental impact of transport were still important factors to relatively many respondents and could contribute to making more sustainable transport modes more popular. Of these factors, cost was more important for respondents than health or environmental concerns, which were rarely among the top priorities.

Only very few people stated 'softer' factors (e.g. 'transport mode that expresses my identity', 'feeling of freedom', 'the modes of transport that family and friends use', etc.) as influencing their choice of mode of transport. This doesn't mean that these factors didn't have any influence on respondents' travel mode choices, but that they were most likely less significant than the more practical factors.

### 4.6 Characteristics of the interviewed families

This section includes a description of the socio-demographic characteristics and diversity of the of interviewee sample (Section 4.6.1), as well as family travel behaviour (Section 4.6.2).

#### 4.6.1 Characteristics and diversity of the interview sample

The aim was to have a diverse sample of interviewees with a good proportion of families with the characteristics of 'educated suburban families' (as identified as a target group for travel behaviour change for more sustainable transport by the Department of Transport in 2011 (Thornton et al., 2011)), as well as families from other backgrounds reflecting the diversity of the area studied. The aim was not to generalise from the results of the interviews but to highlight results from each family in their own right, looking at both commonalities and differences between the different families' travel behaviours. Overall, the interviewee sample was sufficiently diverse (see Table 5 (Characteristics and travel behaviour of family households), and Appendix 4 (Interviewees' survey responses) for the complete overview of each family's characteristics).

**Table 3**

***Socio-demographic profile of survey respondents***

| | |
|---|---|
| **Sex of respondents** | 81% female, 19% male |
| **Most common age groups** | |
| 35-44 years old | 57% |
| 25-34 years old | 24% |
| **Share of Black, Asian and other non-white minority ethnic backgrounds (BAME)** | 35% |
| **Gross annual household income** | |
| Less than £10,000 | 9% |
| £10,000-19,999 | 12% |
| £20,000-34,999 | 15% |
| £35,000-49,999 | 14% |
| £50,000-74,999 | 21% |
| £75,000-99,999 | 11% |
| £100,000-124,999 | 6% |
| £125,000-149,999 | 2% |
| £150,000 and more | 10% |
| **Respondents living with a partner in the household** | 84% |
| **Respondents with a university degree** | 51% |
| **Average number of adults in the household** | 2 |
| **Average number of children in the household** | 2 |
| **Median age of first child** | 7 years |
| **Median age of second child** | 5 years |
| **Average years lived in the area** | 9 years |
| **Respondents in paid employment** | 73% |
| **Respondents working full-time (of those in paid employment)** | 51% |
| **Average distance home to workplace** | 8 miles |

**Table 4**

***Travel behaviour of survey respondents***

| | |
|---|---|
| **Car ownership** | |
| Non-car owners | 16% |
| Owning one car | 52% |
| Owning two cars | 30% |
| **Motorcycle/scooter/moped ownership** | |
| Owning one or more | 5% |
| **Bicycle ownership** | |
| Non-bicycle owners | 38% |
| Owning one bicycle | 10% |
| Owning two or more bicycles | 52% |
| **Mobility impairment** | |
| Households with a member with a mobility impairment | 6% |
| **Number of trips (average per person) in previous seven days per mode of transport** | |
| Car/van | 10 |
| On foot | 9 |
| Underground | 4 |
| Bus | 2 |
| Bicycle | 1 |
| **Transport modes that respondents most commonly wished to use more often** | |
| Car/van | 20% |
| Walking | 33% |
| Underground | 17% |
| Bus | 20% |
| Bicycle | 20% |
| Overground | 9% |
| **Factors which influence choice of travel mode most** | |
| Convenience | 61% |
| Distance to be travelled | 51% |
| Weather | 43% |
| Time available | 36% |
| Cost | 31% |

The majority of the 25 interviewees were women, which were vastly overrepresented. This however, as mentioned in the section on the characteristics of the survey respondents, also reflects the fact that it is mostly the women in a household who are responsible for most of the everyday life co-ordination of families, including the answering of surveys related to it.

Most interviewees were around 35 to 45 years old. The spread in ages wasn't as wide as among the survey respondents of whom nearly 40 per cent were either younger than 34 or older than 45 years old.

Most interviewees were also from a white British background (88 per cent), which is much higher than the percentage for survey respondents and the estimate for the study area (65 per cent and 69 per cent respectively). Three (12 per cent) of the interviewees had a black ethnic background.

The vast majority of interviewees (85 per cent) were educated to degree level, again, a higher percentage than among survey respondents (51 per cent), and the general study area population (around 40 to 50 per cent).

Four were single parent households, slightly overrepresented in comparison with the survey respondent sample. Most interviewees (79 per cent) lived with a partner, and nearly all families had two children, of whom at least one child went to primary school. The spread of children's ages was good and half of the families which were interviewed twice had undergone a change from nursery to primary school or from primary school to secondary school of one of their children. There was a higher share of parents with children at a faith school or independent school in the sample.

The number of interviewed mothers who weren't in paid employment or did voluntary work was much higher (nearly 60 per cent) than that of the survey respondents (just over 30 per cent), however, there was still a good spread of different working patterns (from unemployed to full-time working) among the interviewees (see Table 5, Characteristics and travel behaviour of family households). Similarly, the average income level of interviewed households was higher than that of survey respondents, however, there was still a good spread among interviewees' incomes from very low to very high (Table 5).

**Table 5**

***Characteristics and travel behaviour of family households***

(Where both first names of parents are given, both were interviewed); First interview; *second interview: changes*)

| *House-hold number* | *Single parent households* | Annual house-hold income | Number of cars owned | Employment pattern | Work location | Mode of transport to work | Walking distance to school | Mode of transport to school | Number of after-school activities | Mode of transport to after-school activities | Level of sustainability of travel behaviour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | Nicola<br><br>(2 children; 9+4; *12+7*) | £50-74k; *less* | 1 | Full-time, office hours; *then part-time, 2 days in three days, office hours* | Central London; *same (other location then, but near old one)* | Underground | 40 min | AM: Nicola drives to school, then nursery. PM: Nursery picks up from school. Ex-husband picks up from nursery and drives home; *then: Nicola has more time but still ends up mainly driving children to and from school.* | Not many after-school activities apart from club at school, as Nicola works f/t; *then only 2 ASAs that require driving.* | 2 ASAs: driving; *1 ASA: school takes child, friend picks up.* | Relatively unsustainable; *then very unsustainable* |
| H2 | Monica<br><br>(2 children; 9+2) | £10-19k | 1 | Not employed | n/a | n/a | 24 min | Older child is driven to school by Monica, and picked up by childminder by car (together with other children). | 1 ASA for older child; at school. | No extra journey for ASA. | Relatively unsustainable |
| H3 | Janet<br><br>(2 children; 5+5, *7+7*) | £10-19k | 1 | Not employed | n/a | n/a | 38 min | Janet brings and picks up her children by car. | 2 ASAs each; *then 4 ASAs each.* | Drives to all ASAs. | Very unsustainable; *then worse* |
| H4 | Rachel<br><br>(2 children; 6+4, *10+7;* one child has a mobility impairment) | <£10k | 1 | Not employed; *then voluntary work, part-time, within school hours, term-time only* | n/a; Outer London | n/a; *car* | ca 1.5h | Older child walks to school. Younger child has organised transport by bus to and from school. | 5 ASAS for older child, younger child none; *then 5 ASAs older child, 2 ASAs younger child.* | Drives to all ASAs apart from one. | Very unsustainable |

| *House-hold number* | *Partner house-holds* | Annual house-hold income | Number of cars owned | Employment pattern | Work location | Mode of transport to work | Walking distance to school | Mode of transport to school | Number of after-school activities | Mode of transport to after-school activities | Level of sustainability of travel behaviour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H5 | Vanessa and partner<br><br>(2 children; 7+6) | £150k+ | 2 | Partner: full-time, office hours<br>Vanessa: part-time, voluntary (2 days a week around school hours and holidays) | Partner: Central London<br>Vanessa: Outer London | Partner: Underground (1 change)<br>Vanessa: direct bus | 13 min | Vanessa walks to and from school every day. | Many ASAs but mostly at school or in 15 minute walking distance. | 4 ASAs each, i.e. 3 out of 8 journeys by car. | Relatively sustainable |
| H6 | Tina and Tom<br><br>(2 children; 8+5; *10+7*) | £150k+ | 2 | Tom: full-time, office hours;<br>Tina: not employed | Tom: Central London;<br>Tina: n/a; | Tom: cycled 4 out of 5 days<br>Tina: n/a | 5 min | Tina walks to and from school every day.<br>Then same, but older child goes by himself. | 2 and 5 ASAs for children. | Drive 8 out of 14 journeys.<br>NOTE: Tina also drives to her gym 7 miles several mornings a week! | Relatively unsustainable |
| H7 | Frances and partner<br><br>(2 children; 5+1) | £50-75k | 1 (also often borrow a car from parents) | Partner: full-time, office hours<br>Frances: not employed | Partner: Outer London<br>Frances: n/a | Partner: car<br>Frances: n/a | 18 min; nursery 39 min (near work) | Frances mostly drives older child to school. Partner drives younger child to nursery near work.<br>Note: Partner often away, then Frances drives 10 miles return to nursery. | 4 ASAs (younger child hasn't got any yet) | Drives 6 out of 8 journeys.<br>NOTE: Parents have 3 adult classes each a week and drive to all of them. | Very unsustainable |
| H8 | Debra and partner<br><br>(1 child; 5; *7*) | £35-50k | 2 | Partner: part-time; office hours.<br>Debra: full-time; office hours. | Partner: mostly from home; *then in outer London*<br>Debra: Outer London. | Partner: mostly working from home; *then car*<br>Debra: car. | 30 min | Debra drives child to school on way to work (needs car for work). Partner picks up by car. | 3 ASAs; *then 4 ASAs.* | Only 2 out of 6 journeys by car. 2 ASAs are at school though. *Then 4 out of 8 driven.* | Very unsustainable |
| H9 | Emma and partner<br><br>(3 children; 4, 4, 6) | £150k+ | 1 | Partner: full-time, office hours<br>Emma: not employed | Partner: Central London<br>Emma: n/a | Partner: bus and Underground (two changes)<br>Emma: n/a | 34 min | Emma mostly drives her children to school and nursery, picks up at nursery at midday and picks up from school in the afternoon. | 1 ASA each and 1 swim lesson (joint). | Drives 6 out of 8 journeys.<br>NOTE: Emma drives 7 miles to her gym, several days a week. | Very unsustainable |

| *House-hold number* | *Partner households* | Annual house-hold income | Number of cars owned | Employment pattern | Work location | Mode of transport to work | Walking distance to school | Mode of transport to school | Number of after-school activities | Mode of transport to after-school activities | Level of sustainability of travel behaviour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H10 | Adam and Anita<br><br>(2 children; 9+4; *12+7*) | £75-100k | 1 | Adam: Full-time, office hours.<br>Anita: two part-time jobs, full-time in total, office hours; *then one full-time job, office hours* | Adam: Central London (1 d home).<br>Anita: 1.5 days in Central London; 1 d home; 2 days at other job locally; *then full-time in outer London (1 d home)* | Adam: train and Underground (2 changes).<br>Anita: 2 days cycling/public transport and two days walking; *then five days train and bus* | ca 15 min | Adam mostly drives children to school (in nice weather they might walk the 15 mins.) Some periods their neighbour drives to school. Adam picks up on Wed, Anita drives to pick up on four days. *Then: since Anita started a new full-time job further away, their neighbour drives the children to school, and a nanny picks them up by bus.* | 2 ASA and 1 ASA and both have swimming lessons. *Then: since both children go the same new school, they have all their ASAs either at school or at/near home.* | 6 out of 8 journeys are driven, 2 journeys are walked. *Then: There are no additional car journeys caused by ASAs.* | Relatively sustainable |
| H11 | Helen and partner<br><br>(2 children; 7+4) | Not given. | 1 | Partner: full-time, afternoons and evenings<br>Helen: full-time, two jobs, office hours | Partner diff places in the local area<br>Helen: Outer London (both jobs) | Partner: walked or cycled<br>Helen: car (to both jobs) | 13 min | Partner walks older child to school and back. Helen drives with younger child to nursery and work and back. (School nursery doesn't provide full day care.) | 3 and 2 ASAs | Mostly driven. | Very unsustainable |
| H12 | Laura and Leonard<br><br>(2 children; 11+8, *13+10*) | £150k+ | 2 | Leonard: full-time, office hours.<br>Laura: 33hrs in 4 days, office hours, term-time only. | Leonard: Central London; *same (but location changed)*<br>Laura: Outer London. | Leonard: train/Underground (1 change); *same but tried to cycle 2 out of 5 days during summer*<br>Laura: car | 12 min | Leonard walks younger child to school, Laura picks him up, walking. Older child takes the Underground to school. | 5 and 4 ASAs; *then 5 and 3.* | 14 out of 18 by car, although 4 of those 14 are shared with another family. 4 journeys are walked. *Then: same apart from 2 fewer journeys.* | Very unsustainable. *Then: slightly better but still very unsustainable*. |

| *House-hold number* | *Partner house-holds* | Annual house-hold income | Number of cars owned | Employment pattern | Work location | Mode of transport to work | Walking distance to school | Mode of transport to school | Number of after-school activities | Mode of transport to after-school activities | Level of sustainability of travel behaviour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H13 | Bill and Bianca<br><br>(2 children; 6+4, *8+6*) | £20-35k | 0 (some-times borrow a car from a neigh-bour) | Bill: full-time, roughly office hours incl. weekend work. Bianca: occasional jobs, part-time, office hours; *then part-time, three days, office hours, short days* | Bill: in walking distance from home. Bianca: from home/differe nt clients' locations; *then one employer and two locations in outer London* | Bill: walked, cycled; Bianca: cycled. | 30 min | Bill walks younger child to nursery (5 mins). Bianca cycles with older child to school, picks up from nursery midday, then cycles to school and back. | 3 and 1 ASAs. | Out of 8 journeys, they cycle four, and walk and bus one each. | Very sustainable |
| H14 | Gail and partner<br><br>(2 children. 5+3) | £150k+ | 1 | Partner: full-time, office hours Gail: part-time, two days of 3 hours every other week, evening hours | Partner: Central London Gail: two locations in outer London | Partner: Undergrou nd Gail: car and bus alternately | ca 15 min | Gail walks both children to school and nursery in the morning, but picks younger one up from nursery at midday, then drives to and from school again in the afternoon. | 5 and 1 ASA | 2 out of 5 ASAs are by car. | Relatively unsustain-able |
| H15 | Carl and partner<br><br>(2 children; 9+6) | £75-100k | 1 | Carl: full-time, office hours Partner: part-time, 3.5 days in 3 days, office hours | Carl: Central London Partner: Outer London and further afield (changing locations) | Carl: Undergrou nd (1 change) and tried to cycle two days a week Partner: car or where possible public transport | 1 min | Carl and partner share walking the children to and from school (1 min walk). | 7 and 6 ASAs. | Only 2 out of 13 ASAs by car. | Relatively sustainable |
| H16 | Karen and Kurt<br><br>(2 children; 5+3, *7+5)* | £50-74k | 1 | Kurt: full-time, office hours. Karen: part-time, 3 days, office hours, term-time only; *then part-time 4 days in 5 days, office hours, term-time only* | Kurt: Central London. Karen: Outer London. | Kurt: public transport. Karen: car. | 1 min | Karen and Kurt share. Kurt walks children to school/childminder 3 mornings, and Karen picks then up from childminder and by car. On two days Karen walks to and from school. *Then: Same but one less drive home from school.* | 2 and 2 ASAs. | 3 out of 4 ASAs by car. | Very unsustain-able |

| House-hold number | Partner households | Annual house-hold income | Number of cars owned | Employment pattern | Work location | Mode of transport to work | Walking distance to school | Mode of transport to school | Number of after-school activities | Mode of transport to after-school activities | Level of sustainability of travel behaviour |
|---|---|---|---|---|---|---|---|---|---|---|---|
| H17 | Zoe and partner<br><br>(2 children; 13+11, *15+13*; one child with mobility impairment | £75-99k | 1 | Partner: full-time, office hours. Zoe: not employed. | Partner: Central London. Zoe: n/a. | Partner: Underground (none or 1 change). Zoe: n/a. | 30 min | Zoe drives younger child to school. Older child goes by himself to secondary school (occasionally driven). | Several ASAs for both children, however only one which is not located at school. | 1 out of many ASAs by car. | Very unsustainable |
| H18 | Sandra and Sam<br><br>(3 children; 10+8+3; *11+9+4*) | Not given (high income probable) | 2 | Sam: full-time, office hours. Sandra: not employed. | Sam: Central London. Sandra: n/a. | Sam: cycled March till October; *then already started cycling in January.* | 10 min | Sandra walks with children to school every day, and picks up children by car as they drive on to after-school activities. | 8 ASA each a week. | Circa 6 ASAs by car, rest on foot. Several ASAs of different children take place at the same time and place. | Very unsustainable |
| H19 | Paula and partner<br><br>(2 children; 2+3; 4+*6*) | £20-34 | 1 | Partner: full-time, office hours. Paula: not employed*; then part-time, voluntary work in school hours and term-time* | Partner: Outer London. Paula: n/a; *Outer London* | Partner: public transport (several changes). Paula: n/a; *then car* | 33 min | Paula drives to school, comes back after three hours and picks up younger child from nursery and drives home. Drives to school and back later on to pick up older child. *Then: Pauls drives to school and back once a day as both children there now.* | No ASAs; *then 3 ASAS older child and none younger child* | 1 ASA at school, 2 ASAs by car | Very unsustainable |

For the second interview, partners of the original interviewees were invited to attend, with or without the original interviewee. Only half of the second interviews involved a partner, which provided a different perspective. However, it was also valuable to interview original interviewees twice.

Finally, the spread of accessibility of locations families lived in ranged from very high to very low (see Appendix 5, Accessibility of amenities from home locations). Just over half (i.e. eleven) of the families lived in locations with very or fairly high accessibility and just under half (i.e. eight) in locations with fairly or very low accessibility. However, the analysis of the interviews revealed that what families with children actually consider accessible, might involve much shorter distances, which can directly lead to disproportionate car use. This is also discussed in the second findings chapter (Chapter 6), in Section 6.1 (Travelling with children).

Most interviewees had lived in the study area for a fairly long time (between 6 and 15 years), i.e. it can be assumed that they knew the area very well.

In summary, although the diversity of the interviewees was good, and the sample also included many families who could be classified as 'educated, suburban families' (Thornton et al., 2011), the study would have been even more interesting with more men, more interviewees from different ethnic backgrounds than white British, and more mothers in paid employment interviewed.

### 4.6.2 Interviewed families' travel behaviour

#### Vehicles owned and main destinations

Twelve families interviewed owned one car, six families owned two cars, and only two families used two cars on a daily basis. The cars were typically inefficient in their fuel consumption. None of the cars used low/zero emission technologies such as biofuel, hybrid or electric engines. Only one family didn't own a car at all, which was a much lower share than among survey respondents. This family however still used a car sometimes.

Work, nursery or other childcare, school and after-school activities made up the bulk of destinations in families' everyday life. Less frequent journeys were made for grocery or other shopping, adult leisure activities, or for meeting friends or relatives. At the weekend, families reported visiting friends and relatives (nearby or anywhere

in England), going to a park, soft play centre, and attractions such as museums in London or going on day trips in the region. For holidays, some families flew to their destination, although many visited the countryside in the UK, often going camping.

Roughly one third of families (i.e. six families) had one child at nursery and one at primary school, another third of families had all their children at primary school, and the rest had a variation of these constellations over the two interviews. This means that most parents had to co-ordinate everyday travel most of the time with two children and to at least two destinations. Only two families had a child at secondary school at the second interview, which means that only three families (including the family with one child) travelled with one child only, at least some of the time. Two families had a family member (i.e. in both families one of their two children) with a mobility impairment.

**Travel to work**

Firstly, nearly all of the fathers of the households of the interviewed families used public transport to work, all week, unless they worked one day from home. Three fathers cycled 2 to 4 days a week to work, two of them nearly all year round. The low level of use of the car to work was mostly due workplaces being in Central London, where the relatively high congestion charge and a lack and high cost of parking are in place.

Of the twelve working mothers, most drove to work five days a week, and some drove on fewer days. This shows that despite fewer mothers working, in general, as well as full-time, more of them worked in places other than Central London, which most of them drove to. For details of household incomes, parents' work locations, working hours and modes of transport to work, see Table 5 (Characteristics and travel behaviour of family households).

**Travel to child-related destinations**

Travelling to nurseries, school and after-school activities was exclusively the responsibility of the mother in 9 of the 19 families, whereas in 7 families the parents shared the travelling with the children roughly equally. Lift sharing arrangements between families were rare.

Many of the families used childcare before school in the morning, such as breakfast clubs at school or another place, a childminder, or a neighbour. Many of the families also used after-school clubs or activities at school as part of their childcare. Three families used a childminder to pick their children up from school.

Seven out of 19 families' children walked, cycled or took public transport to and from school, three families' children did so one way, to or from school, and were driven for the other journey. Nine families' children were driven to and from school every day. Two of these families realistically would not have had any other choice than to drive as they had a child with a mobility impairment. In summary, around half of the children were driven to school and half took other modes of transport.

Regardless of whether for childcare during work times or not, all children from the age of around five years old took part in typically around 4 after-school activities or after-school clubs a week. Three families' children had 6 to 7 such activities each a week, with the children of one family each taking part in 10 after-school activities a week, in addition to a number of competitions and events at the weekend.

Parents in the typical family with two children in primary school, drove on average to 3 out of the 8 after-school activities that children did on average in total. Some parents walked with their children to after-school activities (with walking distance being mostly perceived as a maximum of 10-15 minutes). After-school activities that took place at children's schools, did of course not result in a journey. However, there were additional journeys when parents had to pick up children from school at different times. Some parents regularly drove one child to an activity, then back home, just to pick them up again around 45 minutes later, dropping off the second child, driving home again and then picking up their second child shortly after and driving home again, i.e. doing six separate trips.

Overall, the trip to school was one of the most frequent journeys that families did by car. Around half of all families drove their children to and from school every day. However, roughly the same volume of car journeys was generated by after-school activities. While families drove on average only to a minority of after-school activities, this applied to nearly all families, i.e. resulted in the same number of journeys than to school, to which only half of all parents used their car for. This shows that car-dependence for after-school activities affects a much greater number of families.

Travel to after-school activities was therefore at least as significant in volume and environmental impact as travel to school.

**Travel for shopping**

Most families did their grocery shopping in a large supermarket, which they drove to on average once a week and typically bought large amounts of groceries, which they then used their car to transport. Many families regularly ordered their grocery shopping online from one of the large supermarkets to be delivered, but most families still alternated online shopping with a drive to a large supermarket. Most families also regularly walked or drove to their local shops for smaller shops, e.g. on the way back from somewhere else. Many families occasionally went shopping at Westfield Stratford, an at the time newly opened large shopping centre next to the Queen Elizabeth Olympic Park. Some families took the Underground there (direct connection, taking ca. 10 minutes), but most drove, as parking was free for two hours (this changed in 2014, with the introduction of a parking fee of £2.50 for the first hour).

**Level of sustainability of families' travel behaviour**

In the sample of interviewees, most car travel was done by mothers, as nearly all fathers worked in Central London to where only commuting by Underground, or potentially cycling were practically feasible, due to the high expense of the congestion charge in place for private cars entering Central London. The majority of mothers who worked, did not work in Central London and drove to work.

Around half of all parents, again, mostly mothers, drove their children to and from school, and also drove to most after-school activities. Some parents walked or cycled with their children to those activities that were close by. Many fathers took their children to some of the after-school activities at weekends, mostly by car.

As there is no concrete agreed definition of sustainability or sustainable travel behaviour, it is difficult to determine the sustainability of the studied families' travel behaviour. The focus of this study was on environmental sustainability, one of the main indicators of which is the amount of greenhouse gas emissions produced by travel. However, this study didn't collect accurate trip or emissions data. In order to make a broad judgement of the level of environmental sustainability of families'

travel behaviour, the amount of car travel as opposed to the use of alternative travel modes (walking, cycling and public transport), as talked about by the interviewees, especially on the most frequent everyday journeys which most often were the journeys to school, nursery and work, was considered. It was also noted whether families had a bigger or smaller car, as small cars often emit fewer greenhouse gases. The analysis resulted in a very basic classification of the sustainability of travel behaviour of families into 'very unsustainable', 'fairly unsustainable', 'fairly sustainable' and 'very sustainable' travel behaviour.

Only one of the 19 families had very sustainable travel behaviour. This family did not own a car and tried to walk, cycle or take public transport everywhere, driven by their environmental and cost consciousness. However, the family struggled without a car, as there regularly were journeys which family members would have preferred to take a car for, for example driving to school when it rained, or to make it in time from school to an after-school activity. Although they didn't own a car, they still used cars, as they were regularly given lifts by friends and neighbours and they had an arrangement with a neighbour whose car they could borrow on demand. This shows that even though it might have been aspired to, environmentally sustainable travel behaviour was not very easy to achieve for families in the study area.

Three families in the sample had fairly sustainable travel behaviour. This leaves the majority of families, i.e. fifteen, who had fairly or very unsustainable travel behaviour. Eleven of these fifteen families had very unsustainable travel behaviour, i.e. drove large amounts of kilometres. For two of these families, however, driving was the only practical option to travel as they had a child with a mobility impairment.

**Conclusion**

The background information on the study area gives evidence of an attractive outer London suburb, popular with families and well accessible by a number of transport modes, including alternatives to the car. The survey population were all parents of four of the nine primary schools in the study area. The sample of respondents provided some background for the interviewee sample to be compared with, including evidence for driving and walking being the main modes of transport, as well as factors for transport mode choice being mainly practical.

The socio-demographic background of interviewees was on average typical for the study population, however, with some overrepresentation of women, non-employed interviewees and interviewees with a White British ethnic background. Still the 19 interviewees provided a diverse sample. In terms of families' travel behaviour, the main destinations were not surprisingly work, childcare, school and after-school activities. What was surprising however, was the large amount of after-school activities that children took part in, and the associated travel that was generated. Furthermore, a large number of children went to a school which was not in walking distance from their home, and most of these children were driven to school. Therefore, the large majority of families had fairly or very unsustainable travel behaviour.

Interestingly, while only eight families in the sample lived in a location with fairly or very low accessibility, there were many more families (fifteen) who had a fairly or very unsustainable travel behaviour for their everyday journeys. Put differently, only four of eleven families with a fairly or very high accessibility of their home location showed some level of sustainable travel behaviour. This is evidence for the fact that living in locations with high accessibility does not necessarily translate into sustainable travel behaviour. As will be presented in the following chapter, accessibility was found to be only one factor in families' everyday travel behaviour, and has to be seen in the context of the time available for travel, among other factors.

With these facts in mind, the following two chapters turn to the findings of the analysis of the in-depth interviews, which indicate how family travel behaviour comes about and how it is related to family everyday lives.

# 5 Interview findings – Factors influencing travel behaviour

This chapter (together with Chapter 6) presents the results of the analysis of 30 interviews with 19 family households, conducted over two rounds of interviews spanning two years[4]. As detailed in Chapter 3 (Methodology), I analysed the interview transcripts mainly using a narrative analysis approach. This led to a better understanding of the factors influencing family travel behaviour, which are detailed in the current chapter. It presents the factors that were reportedly the most influential in affecting family travel behaviour, especially focussing on factors which lead to extensive car use. As one rationale of this study is to better understand how travel behaviour of families could become more sustainable, I aimed to identify a hierarchy of importance among factors, i.e. to show which factors were more influential or overriding other, less important factors, i.e. which factors might need to be addressed first for change in travel behaviour to be possible. How factors are part of the wider everyday life of families and details on how the latter works, give further insights into how family travel behaviour comes about and how it could become more sustainable. This is the topic of the following chapter (Chapter 6).

The main factor influencing family travel behaviour most was families' space-time constellations. These are made up of the spatial distances which families travel, in order to reach all of their chosen destinations, and the daily time available, i.e. the daily schedule of journeys made by a family. The underlying factors influencing these space-time constellations, e.g. parenting cultures or time pressures resulting from differing work and school hours, are also presented.

Other main factors not directly related to space-time constellations (i.e. transport policy, parents' special interests, and parents' mental health), as well as secondary, contributing factors (leisure travel and car choice, and people's material and emotional experiences of everyday travel) are then presented. The different types of factors interact and influence family travel behaviour, and are affected by the social world in which they are embedded. The categorisation of factors differs from the clear 'individual', 'social' and 'contextual' categories outlined in the original

[4] First, 19 parents were interviewed, then 11 of them (or their partner, sometimes together) were interviewed.

conceptual framework. In Chapter 7 (Discussion of findings), Section 7.6 (Updated conceptual framework), I comment on the original framework and present an updated conceptual framework incorporating the research findings.

To illustrate how the different types of factors work together to influence family travel behaviour in context, the first section presents short profiles of three families' everyday lives and travel behaviour. All descriptions and quotes of families in the following chapters can be cross-referenced using the household identifier number (e.g. H1, H2, etc.) with Table 5 ('Characteristics and travel behaviour of family households') in Chapter 4, Appendix 4 ('Interviewees' survey responses'), as well as with the short profiles in Appendix 6.

### 5.1 Profiles of family everyday lives and travel behaviour

This section presents short, diverging descriptions of three of the studied families' travel behaviour and the factors influencing it, showing how the most significant factors differed among families and how factors were interrelated. Short profiles for all interviewed families can be found in Appendix 6.

#### H11: Helen and her husband: busy lifestyles – number of destinations

Helen, her husband and their two children (7 and 4 years old) live in a fairly isolated residential location within the study area, with the nearest high street a 25-minute walk away, but their child's school only a ten-minute walk from home. Helen and her husband both work full-time; Helen works office hours in a neighbouring borough and her husband does freelance work, often in the evenings. Helen has a very busy lifestyle, working in two jobs, helping out her mother with a market stall at the weekend as well as engaging with a number of relatives who all live in neighbouring boroughs in East London.

Helen drives everywhere in her small car as it is useful for her and as she doesn't like going on buses which she feels are cramped and uncomfortable. She loves walking with her children to school, even in the rain, and would like to walk more if she had more time. In practice she often drives to school, continuing to work afterwards. Although her husband is busy, too, he walks everywhere, even longer distances, as he prefers it to driving or public transport. He cycles, too, and only takes the car if he needs to transport something. Helen won't let her children cycle for everyday

journeys out of safety concerns, however her husband sometimes cycles together with their older child.

**H12: Laura and Leonard: a mix of factors influencing travel behaviour**

Laura and Leonard and their two children (11 and 8 years old at the first interview, and 13 and 10 at the second) live in walking distance to all transport and amenities including their chosen independent primary school. Laura and Leonard share the task of walking their children to and from school every day. Both intend to walk whenever possible and taught their children how to keep safe as pedestrians and how to navigate public transport, as a life skill. However, for good schools and after-school activities they would always drive if necessary. They did a lot of driving for the children's after-school activities but this decreased significantly when the older child started secondary school in Central London (which he can reach on the Underground by himself) and started to have a choice of excellent after-school activities at this school.

Laura's husband takes the Underground to work in Central London. Laura is the main driver in the household as she drives to work on four days each week. She chooses to work at a school in a neighbouring borough, in order to receive the Inner London allowance on top of her basic salary. Schools in her own borough only pay the lower outer London allowance. Laura could probably take the bus to work, but it takes longer than driving and she also wants to be able to pick up her child from primary school in the afternoon, which she can just about make as she agreed working hours to start early and finish early, but to make it to school in time she then has to drive as it is the fastest option. The family car was cheap to buy but is very inefficient to run.

For this family, space-time constellations are the reason why the family walks to school (due to the short distance, which accidentally resulted from their preference for independent schooling), and why Laura drives to work (the combination of a work place further away and the time pressure to be back in time for school end due to the mismatch of working and school hours, resulting in part from Laura's preference for a higher earning job, i.e. one paying the Inner London allowance).

**H6: Tina and Tom: fewer influencing factors – mainly distances**

Tina and Tom chose their local school in five minutes' walking distance, and Tina walks their children (8 and 5 years old at the first interview, and 10 and 7 at the second) to school every day. However, their home location is not very well connected generally and although Tina doesn't work outside the home, she drives everywhere else, e.g. for shopping, meeting friends, exercise, etc. Tina would also drive to school if it wasn't such a short walk. Tom cycles or takes the Underground to work in Central London.

Tina and Tom's family's travel behaviour is mainly influenced by relatively simple distance parameters, i.e. that the school is so close that walking is highly likely, and that their neighbourhood is relatively isolated so that most other journeys are most likely done by car. However, it has to be noted that the simple distance parameters which happen to determine the how the family travels, are originally the result of more complex preferences around school choice and where to buy a house, i.e. Tina might drive less if she and her husband had decided to buy a house in a more accessible neighbourhood, or drive even more, if they hadn't chosen their nearest school.

### 5.2 Main influencing factors - Families' space-time constellations

As was explained in Chapter 4 (Setting the scene – Study area and family characteristics) in the sections on the characteristics and travel behaviour of the interviewed families, whether a family lived in a location with high or low accessibility did not necessarily determine the mode of transport family members used. This is, in part, due to the fact that while a family can have access to a number of amenities nearby, family members might in practice still choose to travel to activities further away. Families furthermore vary in the number of destinations that they travel to.

Accessibility is only one of several factors that constitute families' space-time constellations. A different concept, space-time, according to Torsten Hägerstrand's time-geography theory from the 1960s, is the possibility for travel each day within given time and space constraints. Such constraints broadly include accessibility, geography, availability of destinations and people to meet within certain time frames, and rules and regulations (Lukas 2011).

The interviewed families' chosen everyday itineraries within their specific space-time context, i.e. what I call families' space-time constellations, were found to be the main factor for the outcome of much of their travel behaviour. The concept of families' unique space-time constellations goes beyond Hägerstrand's space-time, in that it not only considers the potential for daily travel as limited by time and space generally, but the outcome of people's choices of activities and the resulting actual journeys travelled. Space-time constellations also connect space-time to underlying factors, such as individual attitudes and social norms, as well as to the general process of everyday life co-ordination in family households (the latter is the topic of Chapter 6) which influence these space-time constellations in the first place.

As was also established in the previous chapter, most of everyday travel of families went to few common types of destinations such as workplaces, nurseries or other childcare, schools and after-school activities, which mostly have similar start and end times, i.e. within the daily period of between around 7am and 7pm. The activities related to these common destinations were often relatively inflexible regarding time, i.e. started and ended at set times (e.g. school, work, after-school activities). The journeys to these destinations therefore framed any other journeys, e.g. for shopping, visiting friends or activities for adults. This was evident for example with grocery shopping, the bulk of which many families got delivered to their house or did themselves by car on one of the weekend days, as their weekdays were usually already busy with other journeys. Families also often did their shopping on the way to some other activity, e.g. Laura (H12) sometimes went to the supermarket near her son's school after work and before or after picking her son up. Adam's wife (H10) regularly did a larger supermarket shop after dropping off and before picking up again one of their children at tennis on a Saturday morning.

Despite all having access to the same amenities in the area, and despite having to adhere to similar timeframes around work, childcare, school and after-school activities, each studied family had different weekly itineraries. Furthermore, each family's travel behaviour differed despite all families having access to the same modes of transport, i.e. the car, public transport, walking and cycling. It was therefore interesting to study how families chose their specific destinations and the activities which they took part in at these destinations, in the first place, as these determined

the amount which families travelled, and in turn the potential for the use of and actual choice of transport modes. The following sections detail the most influential factors for the choice of family activities and destinations.

### 5.2.1 Underlying factors of space-time constellations: Choice of school

Parents in the UK can freely choose the school they send their children to. This choice is in practice restricted by viable travel distance, and by schools' oversubscription criteria, i.e. if a school is oversubscribed most places are generally allocated to the children living nearest to a school (after places being given according to criteria such as specific social or medical needs and sibling rules). However, parents often still have a choice of several schools, which means that in practice many children don't go to their nearest school.

Several types of school can be more likely to have students who on average live further away. While faith schools might also allocate places to applicants living closest to school first, distances can be longer, as the pool of children in a given area who are eligible for a place due to church attendance or other criteria is usually smaller, and therefore students are further dispersed. Independent, fee-paying schools might operate with yet other admissions criteria, such as entrance tests, or exclusively allocate their places on the basis of a waiting list, both of which can increase the number of children living further away. Also, generally, larger schools are more likely to have children travelling farther than smaller schools with fewer places, however, this is also influenced by how over or undersubscribed each school is and by the density of population and families living in the area around the school.

#### School choice as part of parenting cultures

*"It's a big thing; I mean, parents spend a lot of time planning and thinking about it."* (Leonard, H12)

Choosing the best possible school for their children was found to be an important social norm among the interviewed families. All parents in the sample mentioned that they would like a good or 'the best possible' school for their children. Most parents did not only consider their local school but also schools further away. As a result, only just over a third of families chose their nearest state school. They often mentioned that their nearest school was good, but that their preferred school was better.

Some parents were interested in matching a child's interests and inclinations specifically, especially when looking at secondary schools, e.g. Helen (H11) was looking for a school with an emphasis on creative subjects. Sandra (H18) would choose, or even expected to choose, a different secondary school for each of her three children.

> *"Yes, there are many different considerations* [including how to get there]*, but it's the right school for the child really, (…) and irrespective of gender* [her three children] *probably wouldn't end up going to the same school because they are different characters and personalities. (…) so I think you have to make the judgement based on the individual child (…)."* (Sandra, H18)

Schools were chosen according to their pupils' average level of academic attainment, which can be studied from school league tables, performance indicators, school inspection reports published by Ofsted (the UK Office for Standards in Education, Children's Services and Skills), or from anecdotes and general reputation. However, several parents also mentioned that the social background of the majority of students at a school was important to them. Some parents openly admitted that they were looking for a school where most children come from a background similar to themselves, which in the sample's case mostly meant middle-class families. Some parents specifically chose the independent school in the study area for its good educational standards. Vanessa (H5) however also praised the network of influential social connections that their children might benefit from at that school, as well as the value of its good reputation. Monica (H2) stated how she would like her older child to attend a popular independent secondary school in the area:

> *"I mean you want them to go to a good primary school, but it's more important with a good secondary school. I mean – already - you've got these conversations with other mothers: 'Oh, have you thought about schools?' and I try not to cry, frankly, because in my era, you went to the school you could walk to. That was pretty much it. We didn't have the Ofsted reports and things like that. I mean, yes, school had reputations by word of mouth, but you didn't have this kind of fight for schooling.*
>
> *And I know that my daughter will just want to go to the school that most of her friends go to. But one of the teachers at school told my mum about*

[popular independent school] *and I'd never heard of it. All I knew was that none of my friends were going there* [laughs]*. I mean it's very good. If my daughter would get in there, I'd love it, but the fees are ridiculous, I said, the only way you are going to go there is on a scholarship,* [laughs] *because it's £3000, £4000 a term now? (…)*

*So, as long as the school is good, with good staff, she'll be fine, it doesn't have to be top, but for me it's about the facilities and the mix of people that she'll meet. Because I think when you're older you appreciate more the whole concept of networking. And I think the friends she would make at somewhere like* [the independent school]*, they will go on to such different types of careers, that if she maintained those friendships, you just don't know where it might come in handy, really* [laughs]*. And [the independent school] have their own leisure centre now and tennis courts and a theatre and a chapel and all these kind of things, it's fantastic, it opens their eyes."* (Monica, H2)

Also Janet (H3) emphasised the importance of a good school over choosing the nearest school:

*"(…) it's the competitiveness of getting the children into a right school. So we have a school nearby but we thought* [their chosen school] *was more suited to our needs. So means we have to travel out. It's the only Church of England school in the borough.*

*(…) I think, school aside, it's good for [her children] to get to know a new place, have a new set of friends, because they have friends that live in the area, but if they went to school here they would just have the same friends, and the same environment. Well, obviously, before I had the car, when I was very late and I was waiting for the bus and it wasn't on time, I wished that school was just down the road."* (Janet, H3)

Paula (H19) chose the small Church of England school over half an hour's walk from where she lived, particularly because of its intake of predominantly children from a British and middle-class background. Talking about possible secondary schools, Paula admitted that she wouldn't want to send her children to any of the local schools. Asked whether she would consider a newly opened academy in the area, she said

that she was mainly looking for her family to be part of a like-minded, middle-class community:

> *"Yeah, that* [newly opened local secondary school] *might be quite good... but ehm, I don't know, (…), I'm thinking: 'Who are these children? Where are they from? Are they in social housing?'*[laughs]*, so, it's odd, it's like this terrible British obsession with class, it's just what rules it all, I think, it's terrible. (…) And I mean, I'm absolutely a victim of that – a good school – it's a class thing, it's wanting to mix with people like yourself."* (Paula, H19)

Most parents agreed that if their preferred school wasn't in walking distance, they would be prepared to drive their children to it regardless, if they got a place.

**Impact of school choice on travel behaviour**

Over half of families' children went to a Church of England school or independent school, which contributed to only a third of the families living in walking distance to their chosen school. Still, among the other just under half of families whose children went to community schools, also only just over half chose their nearest school, and therefore lived in walking distance to their school.

The journey to school is generally one of the most frequent journeys that families do and is therefore important in terms of the environmental impact caused by family everyday travel behaviour. The distance to school also often influences the distance from home to other, related destinations, such as after-school activities and children's friends' houses. This can have a significant impact on the volume of travel, especially when comparing schools in walking distance with schools that can only reasonably be reached by car. For example, Tina's (H6) children went to the local school a five minute walk away. Although Tina often drove to activities or to go shopping while her children were at school, she also had days when she didn't use the car at all as she liked to*, "stay close, just in case I've got to pick one of the kids up"*. On such days, she might walk to school and back, visit other mothers in her neighbourhood, go for a run in the large park nearby, pick her children up from school again and take them to one of the local after-school activities before walking home again. Being able to do all of these activities without using a car was facilitated

by the choice Tina and her husband had made to send their children to their nearest school.

The opposite, i.e. large amounts of car travel, can occur when children go to a school further away. Finally, the journey to school has to always be considered in connection with any other siblings' journeys, either to other schools, or for younger children, to nurseries or childminders. These might be located out of the way and have different start and end times, which complicate school journeys further. For example, having one child at primary school and one child at a school nursery, most of which typically only offer sessions of three hours either in the morning or afternoon (reflecting the current 15 hour free childcare benefit available for all children over 3), already increase the number of journeys to school from two to three return journeys a day. The farther away the school and nursery are from each other and from home, the more likely these journeys are done by car, and the total distance travelled and related negative environmental impact is multiplied.

This study focussed primarily on households with children at primary school age, as nearly all through primary school children are usually accompanied on their journey to school. Secondary school children are usually assumed to travel to school by themselves or with friends. However, evidence from the sample showed that children at secondary schools were nevertheless regularly driven to or from school by their parents.

Sandra's (H18) oldest of three children was about to start secondary school a few months after the second interview. Sandra had met parents with children at that school who told her that parents usually drove their children to school in the morning, and that children travelled back by themselves in the afternoon, which is what Sandra anticipated her family would do, too. Travel to secondary schools was not a focus of this study, however as distances to secondary schools are usually much longer than to primary schools, an increasing trend of secondary school children being driven to school would lead to large additional negative environmental impacts being generated by school travel.

### 5.2.2 Underlying factors of space-time constellations: Choice of after-school activities

Researcher: *"So, what after-school activities do your* [three] *children* [11, 9 and 4 years old] *do?"*

Sandra (H18): *"Today, they've done cricket (…), on Tuesdays they do swimming (…), and* [her youngest child] *also does netball at school, and then on a Wednesday* [the youngest two children] *both do arts club at school and then* [the middle child] *goes to tennis, and then they [all] go swimming. Thursday they do diving (…), and Friday they do cricket (…). And then Saturday it's just, ehm, more of the same really,* [middle child] *goes to* [cycling centre]*, and they all play tennis. (…) on Sundays we go to church, and* [youngest child] *sings at the choir there. (…)"*

Sam: *"What else?* [Middle child] *plays the drums,* [eldest child] *did cornet for a while; they used to play piano;* [eldest child] *does ballet…"*

Sandra: "[Eldest child] *does scouts, and* [middle one] *will start that again… So they never did acting school, or singing lessons (…). I just think it's nice for them to be outdoors – and being kids really…"*

Children in the studied sample had on average four or five after-school activities a week (including the weekend), with most children typically either doing 3 to 4 or 6 to 8 activities each week. For the analysis of this study, after-school activities included classes and sports as well as breakfast and after-school clubs. Both activities on weekdays and weekends were included. Younger children often had fewer and older children more activities. Only a few children only had few after-school activities, or none at the weekend. The most common after-school activity that children regularly attended was swimming. Other popular sports were football and tennis. Many children had music, drama or arts activities or were members of scout groups.

#### After-school activity choice as part of parenting cultures

Most of the studied children's leisure time was taken up by after-school activities, including breakfast and after-school clubs at school. Sending children to after-school activities can be considered a social norm among many parents, including most parents in the sample. Bianca (H13) answered the question why she sent her children to after-school activities: *"'I don't know; I guess it's just something they ought to do."*

Apart from that, Bianca thought that it was important especially for her daughter to take part in sport activities to build her confidence, self-esteem and learn how to be sporty, also because Bianca and her husband were very sporty themselves doing triathlons in their free time. Similarly, Sandra and her husband (H18) said sport was important for their children, for physical exercise, but also to socialise with their friends, have a wider network of friends, work in teams and feel a sense of achievement. Sandra also said that she would rather see her children take part in a sport activity, than be at home where they would then most likely sit in front of computers.

Some of the parents interviewed, although supporting the idea of after-school activities in general, were of the opinion that their children shouldn't have too many them, in order to have some unorganised free time when they can play at home for example. Karen (H16) is unusual in aiming to limit the number of activities for her children:

> Researcher: *"So what activities do you do with your children?"*
>
> Karen (H16): *"I don't want them to do too many, really, I think it's all a bit much. (…) They don't need too many things, too many people seem to think they have to do something every… you know? And also if you've got two and I imagine it's worse when you have three, they do different things at different times, and the other child who is not doing the activities is spending all their time in the car.*
>
> *I hear people saying, oh, you know, they do - from being a teacher- say eight-year olds, they're doing football training twice a week, where their dinner is a sandwich in the car on the way back from football. And I just think, ugh… (…) And it's the cost as well, it's really expensive all that stuff, you know you're looking at five pounds an hour, or for half an hour, depending on the class, ballet is eight pounds…*
>
> *I still think it's good for them, sports, or Brownies, you know, it's good for them to do something and find out what they like. But not every night. (…) I know someone who has gymnastics on a Friday night, ballet on a Saturday and*

*swimming on a Sunday. And it's just like, what happened to your weekend? What happened to your family time?* [Laughs]*."*

Researcher: *"But it's seems to be quite common here…"*

Karen: *"Yeah, yeah, definitely."*

Interestingly, parents who limited the amount of after-school activities for their children were very conscious about what the norm was among families in general and often seemed to feel insecure about their own choices when presented with the amount of activities other families do. Tina and her husband Tom (H6) for example proudly mentioned at the second interview that they were not like other families, driving their children to different activities all weekend, as they liked to keep the weekend free so that they could go out for special things with their children when they felt like it, such as a spontaneous bike ride or walk. However, Tom admitted that hearing that other parents drive their children to activities all weekend, he felt guilty.

Tom (H6): *"You made me feel guilty now."*

Tina: *"Don't feel guilty."*

Tom: *"I feel guilty now that everyone else is doing it, and we're ..."*

Researcher: *"No, not everyone else..."*

Tina: *"We do enough in the week - it's fine!"*

Tom: *"A lot of my mates are doing that, they have two cars and spend their lives running around - I relax a bit more".*

Breakfast and after-school activities which don't necessitate parents taking their children to, but which either take place at school or at places offering pick-up services from schools, e.g. after-school clubs or childminders, were also part of the childcare arrangements that especially working parents used around school hours. Patterns and amount of use of such activities varied from family to family. Some parents used breakfast and after-school clubs five days a week, while others only used one or the other, and yet others used either breakfast and/or after-school clubs on some days and/or other after-school activities which they took their children to themselves, on others.

**Impact of after-school activity choice on travel behaviour**

Similarly to schools, most parents in the sample were concerned about the quality of after-school activities, in addition their own and their children's preferences for type of activity. While all schools in the study area offered a number of after-school activities which were used by many of the families studied, parents also travelled to after-school activities (sometimes much) further away, which almost all of them drove to. The principle idea seemed to be that, within the maximum time available, the most important issue was to choose the 'right' after-school activity and then to try to manage the travel to it as a second step.

Emma (H9) explained what she defined as 'local' when it came to how far she would drive for preferred after-school activities. Her three young children had all their after-school activities in the centre of Wanstead (2.5km from where she lived):

> Emma (H9): *"So it's Central Wanstead for most things, apart from the swimming, which can't be in Central Wanstead."*
>
> Researcher: *"So even when they get older, it seems that most activities can be covered in Wanstead?"*
>
> Emma: *"Yes, and I would count local – as long as you have a car – [a neighbouring borough]. They have a lot of facilities there, too, for example (…) an athletics track in the Olympics that they can use. (…) I know two families on the estate, their children go there every week and do their trainings. You can cover everything, if you perhaps draw a ten mile (16km) radius, or even a sort of five mile (8km) radius around the house, you can probably cover everything."*
>
> Researcher: *"But you'd need a car for that?"*
>
> Emma: *"Yeah, it invariably needs a car, because you finish school and need to be somewhere else in twenty minutes."*

Gail (H14) emphasised the need to drive to after-school activities at a distance although her children also took part in a large number of local activities. Like Emma, she stated preferences for certain activities, as well as that starting times of after-school activities in relation to journey distances caused time pressure, as reasons for needing to drive. Asked whether she could do without a car she said:

Gail (H14): *"But I do think to myself sometimes that (…) the kids wouldn't be able to do as many activities and stuff as they do - which they enjoy doing - if I didn't drive, because some of the things are kind of in Buckhurst Hill or Chingford [both around 10km from where she lives], or you know…, so, you need a car to get there and get back because otherwise it would just be too, it would just take too long, or you wouldn't have the time."*

Researcher: *"So the alternative would be not doing these activities at all? Or are there local things that you could do instead?"*

Gail: *"Yes, there are local things, but I think, well they do go to some local things, as I said, the drama and the karate is local, (…) I mean we're really lucky here, because we've got the golf club, and tennis courts over the road, so more in the summer the kids sometimes will do golf at the club or play tennis and that's all really easy walking distance. But there are the couple of things, rugby and swimming that you have to drive to those. There is a pool closer, Cathall at Leytonstone but even that I would end up driving to, just because the timings, if it's afternoons, you kind of want to get them there, get them back, get tea* [laughs]*."*

Helen (H11) chose specific activities around 7 kilometres from her home:

Researcher: *"How come you chose classes in* [town centre in neighbouring borough] – *do you know anyone there or was it just for the class?"*

Helen (H11)*: "I used to work in* [neighbouring borough], *that's why I know a lot about the different activities there. With the cheerleading, I knew the session leader when it was somewhere else, and my daughter wanted to do cheerleading but then we lived in South London. When we moved to East London, we said yes, and it is very, very good. (…) And the trampolining is in* [neighbourhood in neighbouring borough]*, so it's from* [town centre in neighbouring borough] *to* [neighbourhood in neighbouring borough] *and my mum's friend runs a trampolining club there. And my daughter loves, absolutely loves it there."*

Nearly all children went to weekly swimming lessons. The nearest public pool was on average 5 kilometres from where a family lived, therefore all but one family drove to

swimming by car. However, several families didn't like the facilities of that pool, but preferred to drive 7 or 8 kilometres to a swimming pool at one of two more expensive private gyms north of the study area, for which several mothers already had a membership. With the opening of the new swimming pool at the Queen Elizabeth Olympic Park, located at around 6 kilometres from the study area, some parents then changed their children's swimming lessons to the new facilities there.

The consideration and choice of after-school activities over a large area were found to strongly influence families' space-time constellations. Families needed to manage a number of trips within available time windows throughout the week, leading to most journeys to after-school activities being done by car. The end of the school day was often time-pressured, as most after-school activities started shortly thereafter. This, together with chosen distances, further contributed to families' need to drive rather than use other modes of transport. Long distances to chosen activities also led to time-pressure after activities, in order to get home in time for dinner and children's bedtimes. Much less travel occurred with after-school activities that took place at a child's school, however, even then additional trips were still sometimes generated, when siblings had separate start or end times at school due to one sibling taking part in an activity.

Overall, families having access to a car and children taking part in a large number of after-school activities which are scattered over a large area, seemed to be taken for granted in the sample of families studied. The peak life period when after-school activities contributed to how much families travelled by car was found to be during primary school. Although there were only a few children among the interviewed families who went to secondary school, these usually travelled to after-school activities by themselves for most of the journeys.

### 5.2.3 Underlying factors of space-time constellations: Work

*"(…) Because actually, even when I'm working my four-hour day (…) I drop them at school, go quickly to the tube – like a fast walk because there's a Central Line train at 59, bell rings at 55, so I will rush to get straight on that train – go to* [Central London Underground station]. *And then I've got typically 17 minutes to get up from* [Underground station] *to my office – and I might stop and get a coffee as well. Then, head down, working - I don't take a break at all – until about 2:15; by the time I got*

*out of the office – about 2:20 – again, just back to* [Underground station]*, so, I've got about 11 minutes' grace when I get out a the other end to get [her children] from school, and sometimes I need to get them something to eat, or you know – so it's… by the time I've done that and got them, I'm quite tired."* (Nicola, H1)

*"Everything seems in a rush, like you leave work and I think I don't want to leave* [her son] *too long, once I pick him up at half five, because it's a long day, so I do find that difficult to balance sometimes, and wish that could be a little bit easier."* (Debra, H8)

Work was another main destination of parents in the sample. Parents either travelled to and from work independently or they dropped off or picked up their child(ren) to/from childminders, nurseries or schools before or after work, often on the way. The majority of all parents in the UK work. Although nearly half of the mothers in the sample weren't employed at the time of the interviews, for almost all of them this was an involuntary or temporary state as they either were still at home with a young child before starting to seek a new job, seeking a new job, or in two cases, working regularly was not a viable option due to being the main carer for a child with a mobility impairment.

Co-ordinating everyday travel to childcare or school with parents' travel to work was found to often be problematic, which can be assumed to be a reason why many of the interviewed mothers were not pursuing employment. The main cause for the problems with organising work, home and childcare was that school times did not match work times. Regular working hours in the day were often around at least 8 hours, i.e. including a lunch break but not overtime, therefore employees might be at work between 9am and 5pm. School hours were usually from 9am until 3:30pm. If a parent travelled half an hour to the workplace, the family needed to have several hours' childcare before and after school. For most parents, work was not located near the home.

Most children would have to have 'wrap around' care from around 8am to 6pm in order for both parents to be able to do full working days and not rush on the way to and from work. As mentioned earlier, most parents were not in favour of using wrap-around care, partly due to the cost and quality of such services, but mainly as they didn't want their children to have long days in care.

Sandra (H18) didn't want to ever work full-time again if possible, even when all of her children would be in secondary school, as she didn't want them to do long hours at school and not be "*latchkey kids*" either. Emma (H9) said that she wasn't against working and could have her children at a nursery before and after school, i.e. covering from 7:30am-6:30pm but wouldn't want that for her children as she wanted to spend some time with her children at least after school. Carl (H15) said that his wife worked part-time and he himself was almost happy that he did not get the promotion to a new job with less flexible working hours that he recently had applied for, because:

> *"Putting them* [their children] *in full-time after-school and breakfast club really isn't something that we want to do at all."* (Carl, H15)

Some parents wouldn't have minded the long days for children but were not happy with the quality of the care that was available at the time (e.g. too few physical exercise activities, general low quality of care). Nicola (H1) for example was not against her children doing longer days at school as long as they did high quality sports activities, which would however also have to be affordable. Some parents would have been happier with employing a nanny or au pair to look after their children before and after school, however this – usually most expensive- option not every family could afford.

Therefore, shorter working hours, fitting around school hours were often mentioned as the ideal by parents. Several of the mothers who weren't in paid employment said that they wouldn't want to work full-time anymore if they went back to work, and some said that they would ideally like to work within school hours or flexibly otherwise and either from home or not too far from home.

Debra and her husband (H8) both worked; she worked full-time and he around three quarters of regular working hours. Although they both wanted and needed to work, they felt ambiguous about it, as this meant that their five year old son had some long days at school, too. Debra and her husband organised their working hours within the flexibility that was given to them by their employers, which meant that their son would be picked up a bit earlier on two days, but she would have preferred to pick her son up earlier more often. This would also have had an impact on her travel behaviour:

Researcher: *"Is there anything you would like to change about your everyday life, or its circumstances?"*

Debra (H8): "*If I had a wish it would probably be to work less hours. So that I didn't have to drive all the time and possibly pick my son up more from school. That would be nice to be able to do that and maybe walk back to the tube station and take the tube back a couple of times."*

Work culture in the UK is generally not entirely conducive to managing both work and bringing up children (with its related norms of parenting) easily. Nicola (H1) said that if she could start work at 9:30am she would be able to manage to bring her children to nursery and school without having to pay for care in the morning and without having to drive to the Underground station to make it to work in time.

*"I don't know, I'd really love it if I didn't have the car because the absurd thing is, the only reason I need the car is so that I can start to work at nine. (…) It's just that we're not really set up, you know, for working parents. (…)*

*So yes, I've only been working full-time for a year, in this latest job. So I took this job, 9 till 5.30. And I then found out that only people who had been hired since the last two years are on a contract from 9 till 5.30. So most people have been on a 9.30 start. So you've got a situation where you have ten people out of sixty who are in at 9am and the rest of the office are in at 9.30. So it's that absurd sort of thing where actually, the day doesn't really start till 9.30am.*

*So I'd gone to my old boss and said can I start at 9.30, which would mean that I could save, ehm, £10 a day, and I've got two children there, £20 in childcare and also the faff of the car and the expense of the car. And he said no. But then actually, as I said, I've been off with pneumonia and I emailed my new boss and said I haven't got a car, I won't be able to be at work at nine o'clock, this week, and for the foreseeable, I won't be in the office before 9.30, and she said fine! If we could just formalise that, that would be good, but then it just makes the end of my day longer.*

*(…), but my observation is that we're sort of wedded to this nine to five model which is just ridiculous in this day and age. You know I wake up and I do my emails and I might be still emailing at nine or ten at night, so it's just not a…*

*that structure doesn't have any relevance anymore. So we're all going to this hell in the morning to all be able to get into the office at the same time and putting all this strain on, you know, the roads and the trains and all of the rest…"* (Nicola, H1)

Tina (H6) did not work and aimed not to work until her children had grown up, which meant that her husband could dedicate himself to his job and long working hours completely, because Tina did all work related to the home and the children's upbringing. This was a model which her husband fully supported, also in his role as an employer. He admitted that he wouldn't allow his employees to:

*"leave at 3 or 4pm three days a week to pick their kids up, because everyone else would see them leaving early and that just promotes bad feelings (…)."* (Tina, H6)

He suggested that people looking for such work arrangements would have a hard time finding a job at all.

Furthermore, almost all employees reported that they usually had to stay at work longer than their agreed hours per day, which could be anything from an additional half an hour to several hours. Adam (H10) worked in the civil service:

Researcher: *"And you work full-time? But your starting times are flexible? Is it a flexi time scheme?"*

Adam (H10): *"There is officially flexi time, that you can make use of within reason. But the point is… I think I always do more than my allotted hours. So even if I start at ten, it will not just be till six, it will be half six, seven o'clock."*

However, a few interviewees' employers did offer shorter working days, e.g. by working three days over five days or similar.

While most parents in the sample either had to or wanted to work, nearly all parents wished for shorter or more flexible working hours in order to be able to better manage to be there for their children.

**Impact of work related factors on travel behaviour**

Time pressure due to the mismatch of school and working hours is a problem which sometimes can be alleviated by taking the car as it often is the fastest mode of

transport. Cycling is often similarly fast or even faster, especially when cycling without children (e.g. to work), but was not very popular with parents from the sample, some of the reasons for which are presented in Section 5.4.2 (Travel as material, embodied and emotional experience), in parts of the subsections on 'Infrastructure', 'Objects and equipment', 'Environments', 'Activities while travelling' and 'Travelling as intrinsic experience', e.g. cycling being perceived as impractical and unsafe.

Several families' travel behaviour was affected by the mismatch of school and working hours. Laura worked four days a week and although she could start very early in the morning, the amount of hours worked were just about compatible with her rushing back to school to pick her son up, but there was still time pressure, which is why Laura always drove. At the first interview, Adam (H10) often still drove his children to school, which took five minutes, rather than walking with them, taking fifteen minutes. Taking the car to school, back home and then walking to the train station saved him a further fifteen minutes in travel time to work as he otherwise would have taken a bus from school to his train. When Adam's wife worked in her local business, she also encouraged him to leave the car near her business, which was near his train station, for her to be able to save the five minutes it would take her to walk home to pick it up to pick up the children from school. Driving saved her ten minutes compared to walking. Adam explained why she did this:

> *"(…) because, obviously, it's her business that she's working in, so she kind of works until the absolute last possible moment that she can and then it's like dash to get the kids from school".* (Adam, H10)

Working flexibly would have allowed parents to have more time to use other modes of transport than the car, however, other reasons such as using their car for work, the original school choice at a major distance, or ultimately convenience often meant that some parents drove anyway.

Karen (H16) for example had flexible working hours resulting in shorter days for her, however, she preferred to drive rather than take the bus, as, especially as she commuted out of the usual rush hour, the car was much faster. Although both school and childminder were in easy walking distance from the family's home, and not on the way from work, Karen also always drove to the childminder to pick her children

up after work, instead of parking her car at home and walking less than ten minutes to the childminder and back, arguing that especially her younger child was too tired to walk home after a long day.

In summary, the mismatch of work and school hours contributed to increased car use among parents. The evidence also shows that parents who could work flexibly, ideally within school hours, were still often rushing in the car to work or to school. However, at least in some cases, these parents were more likely to use other transport modes than the car, as they had less time pressure. However, this was in practice also often overridden by either a choice of school at a major distance, the need to use the car for work, in some cases the inaccessibility of work by public transport, or a general preference for driving out of convenience.

### 5.3 Main influencing factors other than space-time constellations

As shown in the previous section, families' space-time constellations, influenced by school and after-school activity choices, their underlying social norms, as well as by work-school hour mismatches, often lead to extensive car use. However, in addition to this, other factors, as diverse as transport policy, parental interests and parental mental health, were found to influence the interviewed families' travel behaviour, through travel mode choices more directly. These factors did not apply to all families but significantly influenced some families' travel behaviour and especially their choice of transport modes. They are presented in the following sections.

#### 5.3.1 Transport policy

As the studied families were located in outer London, transport policy proved to be another main factor strongly influencing their travel behaviour, effectively rendering driving by car into Central London an unviable travel option.

One of the most frequent and often longest journeys, were parents' journeys to work. Most work journeys in the sample were done by fathers, almost all of whom, in contrast to mothers, worked full-time (with only a few of them working a day a week from home). The majority of these journeys to work were to Central London, where a Congestion Charge charging zone was in place. This Congestion Charge amounted to at least £10.50 a day for cars entering the zone at the time of research (Transport for London, n.d., a). The charge, together with a general lack of and high charges for

parking spaces in Central London, high congestion levels on the roads during rush hour, as well as access from the study area by Underground trains, meant that none of the parents working in Central London drove to work.

Apart from the London Congestion Charge, in combination with restricted parking, no other transport policies were noted to have had a major impact on the families' travel behaviour, although some were nevertheless mentioned in interviews. One parent explained that the introduction of a large cycle rental scheme in London led him to use these bikes regularly within Central London to get business meetings, which in turn led him to regularly cycle to work on his own bike.

Some parents noted a lack of cycling infrastructure in the study area, i.e. cycle lanes or cycle parking, which they identified as one of the reasons why they didn't feel it was safe or practical to cycle with their children or for some parents even by themselves. This was despite that the study area had been chosen as a 'cycle hub' within the newly designated 'Biking Borough' of Redbridge, with measures such as installation of cycle parking and promotion of cycling being implemented in the same period than interviews took place (see Section 4.2 (Study area of Aldersbrook, Wanstead, Snaresbrook and South Woodford)). A few parents had noted awareness events (e.g. the free bicycle checks by 'Dr Bike' on the high street), however, none of them had noticed any new infrastructure.

Furthermore, the existence or lack of, fast and direct public transport services on parents' most frequently used travel routes sometimes had an impact on whether they went on public transport or by car. Interestingly, although the existence of an Underground line through the study area was highly significant for parents' work journeys, it was hardly important for non- or part-time working parents, who also did most of the child-related travel. Here, buses and walking were the only, although rarely used, alternatives to the car. The study area had several bus routes in place, however, many of them weren't going (fast or directly enough) to the destinations needed to be travelled to by families.

### 5.3.2 Parents' interest in physical activity, experiences outdoors and transport skills

*"Yes, that's why I try to walk at least one way to the school because both my children and I need to have a bit of exercise. And, yeah, they're young boys, they've got so*

*much energy. Especially when it's wet weather, then they don't get to go out at play time, then they've got so much energy. (…) so…we need to walk at least one way, to get a bit of exercise. Yeah, and they enjoy it, it's very nice."* (Gail, H14)

A large majority of parents interviewed were keen for their children to have a healthy lifestyle and enough physical activity. Not only sports but also everyday active travel, such as walking, going on a scooter, cycling or even taking public transport, which involves a walk to and from stops, were considered beneficial by many parents. This is an attitude which stands in contrast to driving by car and might deter parents from using a car for everyday journeys, if it would evolve into a stronger social norm, and if other circumstances such as families' space-time constellations and (especially in the case of cycling) safety, would change, too.

Emma (H9) for example was keen for herself and her three children to have daily exercise. Although she liked cycling, it didn't provide exercise for her two youngest children, as they still sat on the back of Emma's bike and in a trailer. For Emma, the preferred mode of transport to school was going by bus.

> *"And I like it because when I take them on the bus, I run home. So it's my exercise. (…) And what I've realised as well is, when we take the bus – when we cycle the girls don't get any exercise – when we take the bus, that bit of exercise walking from the bus to school, and invariably they run, or when we go to the swing park, they get ten minutes exercise.*
>
> *Yes, so I think it's quite a nice way to travel, because if not, it can be hard to build exercise into their day. Like as much as you think you're active, in the winter, you come home from school and you might just be sitting at home doing things and not exercise, so that's why I like for us to take the bus."* (Emma, H9)

Bill and Bianca (H13) were another couple who noticed that frequent cycling (as they do) can leave younger children (who are passengers of parents) without exercise.

> *"My son has a swim class on a Wednesday, which is during lunch time. (…) So my wife will take him, and she will take him there in the cycle trailer. She usually will then go back up to school with him and then they'll cycle home.*

*Occasionally she'll carry the scooter in the trailer, so he can scoot home, so he gets some exercise as well."* (Bill, H13)

However, for hardly any of the interviewed families did their interest in exercise and health translate into significantly more active everyday travel. Emma (H9) for example, still often drove her children to or from school, as she had to go to school twice because her two youngest children only went to the school nursery for half days. For other families, the distance to school and/or after-school activities was simply too far to be walked, and cycling was in general unpopular with parents, as it was perceived as too unsafe. Nicola (H1) for example, who loved walking, would have liked to walk to school with her children, and while her daughter could have mastered the 35 minute walk easily, her younger son probably wouldn't have. Also, they would have had to set off much earlier from home which would have led to time pressure, and furthermore, walking home from school would have been difficult as the children were usually tired then, and buses too full and slow.

And while the interest in physical activity might lead to the use of alternatives to the car in some cases, all parents interviewed would have still always driven if necessary, including to transport their children to places where they then could engage in such physical activities, e.g. leisure centres, swimming pools or parks. In fact, some of the longest journeys to after-school activities were to sports activities which the parents were especially keen for their children to take part in, such as football, swimming, athletics and trampolining. Some parents also chose a gym for themselves, which they considered especially nice, at a long distance from home, and some of these parents then also booked swimming lessons for their children at the same gym, as they had already had a membership there.

Overall, there was considerable interest in physical activity by parents for themselves and their children, however this rarely translated into using more active modes of transport for family everyday journeys. Most of the physical activities family members took part in were more organised sports and exercise, including walking and cycling as a leisure activity, rather than as an everyday transport mode.

Another interest of many parents was to provide children with experiences of the outdoors, which contributed to some parents at least sometimes walking with their children to school, especially if the route went through greenspaces. Many parents

also spent their holidays in the countryside and often camping. Some families also took bicycles on their holidays. An interest in camping and cycling in rural areas however also meant that these families were more likely to insist on needing a large car, which they then also used for their everyday travel. Again, the interest in being outdoors, potentially leading to more walking or cycling was mainly overridden by families' space-time constellations, which didn't leave time to use these slower modes.

Furthermore, several parents saw the use of active modes of everyday travel as a life skill. Vanessa (H5) mentioned that she was pleased that her children knew when to stop on their scooters (such as at kerbs and driveways) while going on the pavement, and attributes them having learnt this skill to regularly walking with her children from a young age. Also Laura and her husband Leonard (H12) made sure that their children knew how to safely move as a pedestrian, cyclist or on public transport by regularly using these modes of transport.

> *"*[His younger son] *is extremely used to public transport. He knows how to read the maps, he knows how it all works, you know, he's very, very comfortable with public transport. Even at ten years old. And it's the way it should be. Cars, they have a time and place, but it shouldn't become an essential thing. I don't want my boys to think a car is essential at seventeen or eighteen. We have buses, we have tubes, we have overground trains; you know, we're very, very well connected."* (Leonard, H12)

However, both Vanessa and Laura also said that despite their interest in other modes of transport, they would always drive their children anywhere, if necessary, too.

### 5.3.3 Parents' mental health

*"So, but now, I actually think for my mental health it's good to be at work, some other outlet, otherwise, my husband works long hours and then my day… it's like 'so when are you coming home?', because for me, I haven't spoken to anyone else… I don't ever want to not work, but, there's definitely a life balance, three, four days is my ideal."* (Laura, H12)

Everyday travel behaviour was also found to be related to parents' mental health, either indirectly, through activities that improved mental health, or directly through

the experiences during travel. Firstly, several mothers in the sample talked about their everyday life with their young children as being very stressful. This often led to parents driving more by car. Paula and her husband (H19) for example lived on only his low salary while Paula was at home with two lively young children close in age. They could only afford to own a house in a neighbourhood that Paula neither liked to spend time in, nor wanted to send her children to school in. This situation put a lot of mental stress on her. For Paula this meant that she looked for friends and spent most of her days in an adjacent, preferred neighbourhood, which as a result made her feel better. This also meant, however, that she travelled to and from this neighbourhood sometimes several times a day, which she, tired and with two young and very demanding children wasn't able to consider doing by any other mode than her car.

> Researcher: *"So the car is really quite handy, probably in the future as well?"*
>
> Paula (H19): "*Oh god, it is - I couldn't contemplate - I know people do - but I couldn't...I find it really hard to be a stay at home mum, I find it really boring, really difficult; I hate having no money, I hate lots of things about it; so if… - it's like my dishwasher, I could wash the dishes every day but I think I'd be a broken woman, I could go on - with those two* [her children] - *on the bus every day, but I'd probably be an alcoholic - I need every possible modern convenience to make my life bearable, because I largely hate the lot of it* [laughs].
>
> *And I think a lot of women, and if they don't admit that, but I think that - there's so much crap in being a mum - so much washing, you know just the amount of wash - and I could manually clean my clothes, but if - you know, a lot of it is about time. My time is so precious to me, that bit of time when I have no children is so precious, if I had to walk everywhere, bus everywhere, time is the most precious commodity I have, and if that thing* [car] *gets me where I want to be quick and lets me do things fast, that's the most important."*

Laura (H12) was another mother who admitted feeling stressed when she had had a baby. Getting out of the house to go to a gym helped her, and was facilitated by her rushing there and back in the car.

> *"When the kids were younger, I would get a babysitter. Because I just…when I was indoors with them all day long, I would just have a babysitter to go to the gym, if* [Laura's husband] *wasn't coming home - because sometimes he would say 'I'll be home by seven' and you would think, 'Ok, I get to the gym, I get to my class', and then he would be held up at work, so then I would get a babysitter for two hours, pay ten pounds, and use that to get to the gym, because… you need to keep sane."* (Laura)

She later started working part-time again, which she also mainly pursued to increase her confidence, i.e. mental health. She commuted to work by car, as in that way she could maximise the time she could spend with her children.

For Nicola (H1) her car is a means to preserve her mental health. She had had mental health problems a year before the interview and was now keen to stay healthy:

> *"*[The nervous breakdown] *was basically a product of my doing far too much, so working full-time, doing all that running around I described last time (…). So, I'm very careful not to overcommit and do that to myself again basically. So I suppose the car, it just makes life easier for me, makes it less likely for me to get exhausted."* (Nicola, H1)

This shows how travelling by car was not only be convenient for parents, but also helped some to safeguard their mental health in stressful periods of life, when walking, cycling or taking public transport would either not be fast enough, too inconvenient to do with small children, or generally perceived as too demanding. Feeling stressed directly led to the use of the car for these parents. Using other modes of transport, such as walking and cycling were found to have positive effects on interviewees' mental health, however, these did not seem to lead as strongly to the actual use of these transport modes, and will therefore be discussed in the following section on 'secondary, contributing factors'.

### 5.4 Secondary, contributing factors influencing travel behaviour

Family travel behaviour in their leisure time, i.e. on longer distances, was found to be a factor which was not necessarily decisive for families owning a car, but which cemented car use further. It also increased the negative environmental effects of car use, as the type of car a family owned was significantly influenced by a family's leisure

needs. Another secondary influencing factor was people's immediate physical and emotional experiences related to travel. These didn't decide the modes of transport families used, however, they influenced people's attitudes towards certain modes of travel. These secondary, contributing factors will be described in the following sections.

### 5.4.1 Leisure travel and car choice

*"(…) what we do often do, is you know we've got a fairly big car which is nice, if you do have to pick up other children or something like that, I've got sort of extra seats in it, but generally, we don't need a car like that. You need a car like that for if you want to go camping, you know, or if you're going on holidays, but for generally running around, especially now that the kids are in like booster seat car seats. But we need a big car for kind of holidays and stuff."* (Gail, H14)

Two of the most important reasons stated by families for not being able to live without a car were related to travel during weekends and holidays. Firstly, most families regularly visited their relatives, most of whom lived in other parts of England, often in places that were difficult to reach by public transport or involving longer journey times and multiple changes on the way. Paula and her family (H19) for example drove every four to six weeks to Yorkshire to visit her mother. Apart from often being the fastest mode of transport to such destinations, going by car was also found necessary to manage journeys with a lot of luggage due to having children, even for short weekend trips and especially with younger children. Weekend trips were also seen as important experiences for children. Tina and her husband (H6) often went on a trip by car to offer their children such an experience:

> *"(…) we love to just jump into the car and head off somewhere – especially with the boys, we need to take them out and let them run around and take them to all sorts of different places; lots of experiences. Quite often, on a Sunday, we'll drive into London and park for free. And then we'll just go and visit some museum or do whatever."* (Tina, H6)

Holidays were another reason why families felt they could not do without a car. Many went on holidays within England, and camping was a popular type of holiday, for which families again travelled with large amounts of luggage.

Several families admitted that they would not need a large car for their everyday travel, however, that they mainly needed their car and its capacity for carrying luggage for their few trips a year to relatives and for holidays. The choice of using the car was therefore at least to some extent determined by a minority of trips. Once families had a large car, they also emphasised that space was convenient for giving lifts to friends of their children, something that they felt they needed to be able to do to reciprocate any potential favours by other parents. However, in practice, parents rarely gave lifts to other children.

Families in the sample typically bought a large car when, or before, they had their first child, anticipating a future need for such a car. As the initial cost of buying a car was relatively high, families did not change cars frequently, which meant that they often still had a large car when actually a smaller car would have been sufficient for them. Several parents said that since after all of their children had started school, they could have done with a smaller car. However, firstly they then still needed a larger car for holidays, and secondly, parents usually didn't know what to expect in terms of their children's development and associated travel needs for the family, i.e. they kept a large car regardless, for all eventualities.

Carl and his family (H15) for example, tried to minimise their car use but would have never given up their car. They would have considered a car sharing service, but for them to use it, it would have needed to be easily accessible, and also provide cars that transport bikes, as well as larger cars for camping trips, i.e. offer affordable car rental options for holidays. They used their car to go on camping trips, carrying a lot of gear, transport their four bikes to places for leisure cycling (requiring an especially big car), as well as to visit his wife's parents in Essex. In addition to this, Carl's wife regularly needed a car for work. Her place of work changed frequently and was usually located out of town and hardly accessible on public transport. Since they already maintained their large car, they also used it for their weekly grocery shopping in large supermarkets.

Tina and her husband Tom (H6) talked about their car, a German make large estate car:

> Tina (H6): *"Yes, we wanted an estate car, because then we had babies and you take around four million things with you every time..."*

Researcher: *"Would you still need an estate car now?"*

Tom: *"Probably not, probably not."*

Tina: *"Well, no, but I'm used to it now, I like having all this space."*

Tom: *"Although we haven't even thought about buying a new car, because it probably still has seven years left in it."*

Adam and his wife (H10) use their car very much during the week. Their current car was relatively inefficient but they were not going to replace it until it broke down completely. Once they needed a new car, they would look for high fuel efficiency, or even consider not buying a new car at all but use a car sharing service instead. Adam pointed out the need for a car to visit his parents, of a size with at least enough space to hold two suit cases in the boot, however could imagine hiring one for these few occasions. For camping holidays they would need a large car, however, he wasn't sure if they would ever go camping again in the near future as they hadn't been in the last five years. Car sharing and rental cars would potentially turn out cheaper than owning a car.

Helen (H11), who owned a small car, and whose husband preferred any other mode of transport than driving, talked about the family's change from car to train to visit her husband's family:

Researcher: "*Do you also use your car to travel further afield, let's say at the weekend or for holidays?"*

Helen (H11): *"Ehm, we used to, when the girls were really small, drive to Liverpool to see my husband's family. We just used to have so much stuff that we had to take with us, but now the stuff has decreased so we take the train. And it's really easy* [laughs] *we just walk to Leytonstone station and then a couple of changes, and we're at Euston and then it's just the fast train to Liverpool."*

Families often owned especially polluting cars. Apart from families choosing large cars for more space, these were also often very fuel inefficient. This was due to the fact that most families had bought their car out of opportunity, e.g. from a relative, friend or colleague. This way they often got a large car at a cheap price, both of which were

often preferences of families. However, these cars were also often very fuel-inefficient and polluting.

> Leonard (H12): *"But that car we got was cheap, (…) because it is a petrol three litre car, which nobody wants. (…) And we don't drive a lot. So at the time it was very, very difficult to justify paying literally more than twice as much for a diesel car, so over time, even though our fuel costs are higher, it would still have been less. (…) Well, the business case* [of either the cheap petrol or the expensive diesel car]*, I'd say, would still have been similar. But what we did get was a lot of...it's got seven seats. Sometimes we need it to transport the children…"*
>
> Laura: *"Yes, to friends, to football games…"*
>
> Leonard: *"If we do take a long journey, it's got a lot of comfort factors in it, it's got the screen – and we didn't have to pay a big price up front and have a loan… So we just bought the car, it was at a local garage, so that was it… It's probably not the right sort of car for the type of driving that we do, but for the times that you do need to go on a long journey – we might visit my parents in France, sometimes we drive there – it is a very comfortable vehicle to do it in. So that's the car."*

For a new car, Leonard would not have the level of emissions and environmental impact as

> "*the number one consideration. I would buy a two year old car, then pick the right spec and diesel and then see what the best deal was*." (Leonard, H12)

Leonard wasn't convinced about new technology hybrid cars either, because of the heavy brakes and the issue that the electricity used to charge batteries came with their own emissions. Emissions were only considered by making a decision for a diesel and against a petrol engine.

In summary, families usually aimed to have a large car as they anticipated needing the space, although many, especially those with school children, could potentially have done with a smaller car. However, due to high upfront costs, families usually didn't change their car often. When families talked about how they chose their car, the purchase was often a matter of opportunity rather than choice. Minimising the

purchase price was often more important than considerations about fuel efficiency. Very few families considered the environmental impact of their driving and when they did it rarely affected the type of car purchased or their level of car use. As a result, driving a large, inefficient car often cancelled out any environmental benefits of families using their car less.

### 5.4.2 Everyday travel as material and emotional experience

Everyday travel serves to transport family members to places where they can engage in the activities they need to do. Everyday travel is also a significant experience in itself, both physically and emotionally. Whether this experience is positive or negative contributes to what people think about using different modes of transport, which they might either seek out or try to avoid in subsequent travels. The following sections detail the material and emotional aspects of travel which were found to influence family everyday travel behaviour, including experiences with infrastructure, objects and environments, activities while travelling, and travelling as intrinsic experience.

#### Infrastructure

Researcher: *"So one child is nine – would you, are kids going by themselves over there* [to school]*?*

Adam (H10): *"No, not yet, because of the main road, that's over there, at the point where you, where we cross, there are cars parked just here, and there is a sign just here that changes the speed limit from thirty to forty. So basically everyone who is coming this way knows the speed limit changes, they've passed the zebra crossing that is way back here and they think: 'Might as well be doing forty already.' And by the time they're coming here they're doing fifty.*

*Yes, we're crossing the road together, when eventually they start to go to school on their own they will have to go down and use the zebra crossing. I'll have to insist on it basically, because you can't really cross here, unless the Council are prepared to put a zebra crossing in a more sensible place. Again there are cars there that do forty miles an hour. They don't really want to stop at zebra crossings* [laughs].

The use of roads and pavements is a main material factor of everyday travel. Pavements used when walking along roads weren't usually criticised, however, the

roads that needed to be crossed on the way to destinations often were. Zebra crossings were not trusted, especially by parents considering letting their children walk to school by themselves, and even crossings with traffic lights were still seen as a hazard. Safety risks in the material environment often led to anxiety in parents. Frances mentioned a large roundabout which was especially scary to walk past and cross, as the roads leading to it were large and busy and there weren't any safe crossing points for pedestrians. Francis would have liked to have traffic lights or even a subway system at the roundabout to improve safety. Crossings that are safe otherwise, became hazardous due to the amount of cars parked. Karen's (H16) seven year old daughter was able to walk the two minute journey to school by herself, however, Karen would not let her go by herself due to safety concerns.

> Researcher: *"Would you like your girls to go by themselves to school?"*
>
> Karen (H16): *"Yes, it's literally round the corner (…), but (…) she's got to cross one little road, but because of the parents coming in their cars and the way they park, it's so dangerous down there (…), because they, Redbridge Council are having this thing at the moment where they're having a warden to stop them parking on the zigzags and the double yellow lines, but they park in front of people's garages, they block people's driveways, they park right up to where she'd have to cross the road to go on her own, they park right up to the corners – people can't see round the corners…*
>
> Researcher: *"So it's very busy?"*
>
> Karen: *"Very busy, yeah. It's horrible. And at the end of the day."*

Most parents said they found cycling with their children unsafe on roads in their neighbourhood as well as in general. For example, although the basic physical infrastructure for cycling was in place, parents often did not perceive it as safe enough to use. They also stated busy roads, inattentive drivers, and limited visibility due to parked up road sides and junctions with side roads, as safety issues.

Cycling on the pavement - apart from it being illegal - was perceived as difficult and often dangerous for, and due to, pedestrians. Cycling through parks was often desired by parents, especially in the case of the faith school, which was located in a park, however, cycling through that park wasn't permitted. Generally, a lack of suitable,

safe routes for cycling was noted by the interviewees. Some parents would have preferred segregated cycle lanes; others said they'd rather cycle on roads, alongside cars. Rows of parked cars also make it less safe for parents cycling on the road alongside their children cycling on the pavement, due to the separation.

Cycle parking is another element of infrastructure crucial for cycling, a lack of which made several parents worry about the safety of their bicycles and often deterred parents from taking up cycling. Adam (H10) for example showed an interest in cycling with his two children to school, however, worried about the safety of the cycle parking at school and at the station. Vanessa (H5) suspected that the school her children attended didn't have enough space for cycle parking in the first place. However, there was enough space for children to park their scooters, which is one of the reasons Vanessa's children went to school on their scooters.

Congestion on roads is a condition most likely to affect motorised vehicles, such as cars and buses, although dedicated bus lanes can make buses faster than cars on congested roads. Monica (H2) regularly walked the ten minutes to her local high street to go shopping. She also often drove to a shopping centre, which was a 7 minute drive, without traffic, however, the main road to the centre was prone to congestion.

> *"(…) I prefer going out in the morning, because the roads aren't that busy. Because Romford Road can be just horrible. Especially at school run time and then at rush hour it can get really congested. (…) And sometimes, by the time you get in the car and you get in the traffic for the traffic lights, just literally, and I think 'Why didn't I just walk, I could have been there and back by then.' (…) Yeah, it can be a bit nightmarish sometimes."* (Monica, H2)

Furthermore, availability of car parking was perceived as important when using a car. Parking availability in Central London for example was low, and existing parking expensive, which was one reason why interviewees did not drive into Central London.

**Objects and equipment**

Everyday travel on different modes also necessitates the use of things, from vehicles to associated equipment. Cycling especially is a mode of transport which often requires the use of a variety of equipment, which can make it less practical than other

modes of transport. Apart from bicycles, cycling also involves helmets, locks, clothing according to weathers, lights, bags, etc., which all need skills to be operated, need to be purchased, as well as remembered and carried around before and after cycling, which can be stressful. Cyclists are exposed to the weather, which means that they have to be prepared to occasionally use yet more equipment such as raingear, gloves, etc.

Cycling with children also requires the use of specific equipment according to children's developmental stages such as seats, helmets and children bikes, new versions of which have to be purchased and learned how to use on a regular basis. In addition to this, getting bikes in and out bicycle storage was reported to be impractical for many families. Emma (H9) liked cycling, however also noted the practical and child-related challenges of cycling with her three children, which also contributed to their emotional experience of cycling.

> *"(…) the challenge I have is that my girls can't cycle independently but my son can – he loves to cycle. But what I do is I have one on a baby seat behind me and then I have a trailer and one can go in the trailer.*
>
> *The trouble is they argue about who is in which seat - they both prefer to sit behind me rather than in the trailer. So I think we're going to have this lovely, stress free cycle to school where we're all going to be really healthy and it's going to be a lovely way to travel, and we have an argument before we leave, I'm like: "You're going there, and you're going there, stop…!", you know, it's…and also it's getting the bikes out, getting them out of shed, through the house, we have to leave even earlier for that, but that's what I'm hoping to do in the summer anyways, just so that my son gets some exercise."* (Emma, H9)

Some interviewees remarked on the limited capacity to transport things while cycling, e.g. children's sports kits or instruments, which, while only having to be carried on certain days led to parents generally not considering cycling to school.

Cycling as a leisure activity however was popular among families, and some attempted to take their bicycles by car to places which were safe and nice to cycle in, although this could be difficult. Karen and Kurt were prepared to buy a cycle rack to use on their car, however found that the racks which were easy to use only carried

three bikes, which meant that one adult wouldn't be able to join in. The racks holding four bikes however were too heavy and the need to mount extra lights and a number plate on them an additional irritant, which would turn a trip "*suddenly into a bit of a mission*". Karen and Kurt (H16) had done their best to cope with the practicalities of bicycle transport. The year before the interview, Karen often drove with the children, her own and her older child's bike by car, and Kurt cycled to meet them. The year of the interview, the family had suspended their joint cycle trips as their youngest child had started cycling independently which meant that they weren't able to fit this additional bike into their car to drive to their preferred cycling location. Whether this suspension was only temporary is unknown, however the family had not found a suitable rack solution at the time of the interview.

Not surprisingly, many women in the sample reported that the break from cycling, which had been induced by having children, lasted several years. Vanessa (H5), whose children were 6 and 7 years old respectively, experienced the same and it was exacerbated by some of the material and emotional factors of cycling.

> *"(…) I have talked to my husband of having a bike to get around, I used to cycle a lot when I was younger, but I've not quite got round to it yet* [laughs]*, and I haven't got a garage at the moment* [temporarily used for materials during house refurbishment]*. But I wouldn't mind a bike because I could ride up to school and ride home. It's hard work though, cycling* [laughs]*, I think it will take me a while to get used to it again. I also wonder when if I'd go with the children on their scooters and me on my bike, would I just go on the pavement? I don't know really."* (Vanessa, H5)

This quote presents several factors which influence Vanessa's confidence to start cycling again, such as having to negotiate the investment in a new bicycle and possibly her taking up cycling again generally, with her husband, availability of storage for a new bike, being 'fit' enough to cycle again as well as knowing 'how' to cycle.

While car ownership and use was prevalent for the studied families, some also showed an interest in car sharing clubs. Several interviewees would potentially consider giving up the family car in favour of a car sharing club membership, as they didn't use their car that often. However, the main concerns were related to the

material and organisational handling of car sharing cars. Firstly, having to make a booking for a car was seen as limiting any spontaneous trips, such as taking the car to school when it suddenly starts to rain. Secondly, having to first walk to where a car sharing car is parked was seen as another deterrent. Bianca (H13) knew where the nearest car sharing car was located, however, this was a 15 to 20 minute walk away, which would have been impractical for them. The use of an own car was much less stressful in these situations.

**Environments**

Routes and the environment travelled through were often noted by pedestrians. Several interviewees praised the beauty of the local greenspaces and told of memorable experiences of walking through them also for everyday journeys, e.g. to school.

Adam (H10) for example, often avoided the fifteen minute walk over the open fields with his children to go to school in the morning, and drove them instead, as driving was faster and more convenient in bad weather. However, he liked walking to school in nice weather in the summer, and sometimes in the winter:

> *"It's quite nice actually. On frosty days it's actually quite nice to walk over because you know when the ground is hard and you're not going to get wet feet, and it's very pretty".* (Adam, H10)

However, the same attractive routes through natural spaces, can also deter people from taking them, especially for regular journeys. For some families, the most direct route to school led through either of the two major greenspaces in the study area, with only unpaved paths to walk on. This made scooting and cycling on these routes potentially more difficult and, in wet weather, muddy. Furthermore, due to fewer people around on these paths, some interviewees felt them to be unsafe, especially for travelling in the dark.

Public transport is another mode where the environment travelled in has an impact on the travel experience. For Helen (H11) taking public transport was very uncomfortable. She complained about other passengers being rude and unhelpful on the bus, which left Helen irritated, especially when travelling with her younger child. She also noticed a lack of space in buses: "*you're practically sitting on top of the next*

*person*". Helen avoided going by bus, which is one of the reasons why she travelled everywhere by car.

Also Tina (H6) avoided public transport when travelling with her baby to and from work as a nanny.

> *"I used to just put* [her son] *in the car at eight and we'd get there for about half past eight and then I'd leave there at six and come back. So it would have been horrible to get him on the bus or the train at the end of the day or that early in the morning with all the busy commuters. So that was quite nice so I could just stick him in the car."* (Tina, H6)

Bill and Bianca (H13) on the other hand preferred using the train to driving by car, as they could then play with their children with books and crayons they'd take on the journey, and chat, which they enjoyed. They had enjoyed a weekend trip to Centre Parcs by train, which only took around an hour, and included a shuttle service from the station to the centre. Bianca stated the cost of petrol, but also that her children were prone to car sickness, as deterrents to take the car. And as they had never owned a car themselves, even before they had children, they didn't mind having to carry the luggage on such trips themselves.

As mentioned in the description of cycling earlier, weather also often influenced the travel experience. Tina (H6) explained how she decided which mode of travel to use on a daily basis:

> Researcher: *"Does it also depend on the weather?"*
>
> Tina (H6): *"Yes, definitely. On a beautiful day like this I'd definitely walk into Wanstead. But it was chucking down with rain, I'd jump in the car."*

Walking, but especially cycling in the rain was generally unpopular both when travelling with or without children. Even Bianca and Bill (H13), who didn't own a car and completed most journeys by bicycle, often through the rain, admitted to not liking cycling in the rain and often wishing they'd own a car on these occasions.

Adam (H10) took the train every day to and from work. While in the morning he took the mainline train and changed to the Underground, he didn't like to travel back the same way, as the mainline train was less frequent which meant that he would have to

wait on an open, crowded platform for it, which he didn't like doing at the end of his working day.

> *"It's just, standing out there on a platform, and the Central line comes in here and the mainline train goes from there, if there's a problem with the mainline trains, (…) the Central line keeps coming, keeps piling people on the platform. It just builds up, builds up and it is…you know and it can be freezing cold, you're really exposed to the elements, as well, you can be lashed by the rain (…)".* (Adam, H10)

For this reason, Adam often changed at an indoor station on his way home, even though this added another five minutes to his journey. He also preferred this route because he was more likely to be able to get a seat, adding to his physical comfort.

**Activities while travelling**

Interviewees also sometimes engaged in activities while travelling. Leonard (H12), Laura's husband, worked in the city. Instead of taking the Underground all the way to work, he preferred changing to the overground train on the way, because it had better phone reception and he could use the morning commute productively to speak to clients in different time zones. Likewise, he loved cycling to work, however he then wasn't able to do phone calls while travelling. Although the mobile reception was much better than on any train, Leonard had to walk rather than cycle when phoning which resulted in him arriving late at his office.

Everyday trips were also a time when parents and children could chat and simply be with each other, especially while walking. Vanessa (H5) happened to live a ten minute walk from her children's primary school and liked walking with her children to and from school whenever she could, rather than driving:

> *"And no, it's nice to have a chat with somebody when we're walking back from school. It's probably the only time you will get with them. You can ask how the day was, what they had for lunch, yes you can talk in the car, but you have other things to concentrate on, and the radio's on. It's a really nice time. When we come home it's homework and meals and X-Box and Wii's, everything and there's great competition."* (Vanessa, H5)

Helen's children (H11) enjoyed their experience of walking with their mother:

Researcher: *"Are there other things, like the weather, that they don't like going out?"*

Helen (H11): *"Sometimes, but then I tell them to put on their wellington boots and tell them we'll go through the forest and they can jump in muddy puddles (…) I think it's just a matter of making the experience interesting for them. And I kind of make up a lot of stories when we're out and about walking for example. So I've made up a series of stories for them since they were little. You know, 'new adventures* about [older daughter's name] *and* [younger daughter's name] *and their magic scooters'. So they kind of enjoy it for that experience as well. And they often are the ones to drag me out: 'Let's go to the park!' or 'Let's go to Wanstead!' So very rarely would they say no."*

When Helen did have time to walk with her older daughter to school, she appreciated the time as a special time just for the two of them, involving chatting about and planning for the week. As Helen's daughter had missed these walks since Helen had to work early on Fridays, Helen aimed to reschedule her work, to once again be able to walk with her daughter to school.

Also public transport journeys were often perceived to be a good family experience. Nicola (H1) preferred taking the train to see friends at the weekend.

*"You know if I'm visiting people at the weekend and it's an hour and a half on the train I'd rather do that really than be in the car for an hour and a half, just because, I mean - even noticing the last couple of days, taking the bus to school - it's a very different…ehm… I can interact with the children – yeah, they can talk to me while I'm driving but I'm driving and I'm concentrating and I'm driving, I'm in driving mode. Whereas when I'm a passenger with them there's a better level of interaction." (Nicola, H1)*

Carl and his family (H15) took public transport whenever they could, e.g. took the bus to go to their local soft play centre.

*"Say for example if the kids are going for a play in* [soft play centre]*. We are the only stupid people that we know that go on the* [bus number] *to* [soft play centre] *(…), takes a little bit of time. The kids enjoy it, in fact they all know that the* [bus number] *is the bus that goes to* [soft play centre]*. And you know we*

*take some sandwiches to have a sit on the bus* [laughs]*, it's ok, as long as they don't leave their coat on there, like my son did once."* (Carl, H15)

Everyday travel can also facilitate moments of social life with other adults along the way. Debra (H8) for example regretted not being able to take the Underground and then walk to school with her son, which would have enabled her to meet other parents at the school gate, something that wouldn't happen when she used the car to drop her son off, which was a much quicker operation.

**Travelling as intrinsic experience**

Everyday travel can also be an enjoyable experience in itself. Walking for example, was often perceived as an enjoyable, reliable and independent mode of travel.

*"And I like the walk…the thing with walking is you control your own destiny. I know I've got to leave here at twenty past eight to get there for half past eight. In the car you have no idea what's going to happen, with the bus, you have no idea whether the bus is going to turn up. So at least I get my timings, and I know I've got to leave here at five past three to pick them up at three fifteen. So it's easy for me to work it all out. (…) No, that's what I like about walking – I know exactly where I am".* (Vanessa, H5)

People's everyday schedules rarely allowed for walking greater distances, however several interviewees mentioned how much they liked walking and talked about longer walking trips which they had enjoyed. Vanessa (H5) regularly walked with her children to school and on to the high street to go to an exercise class or other destinations, taking her around half an hour altogether. Helen (H11) had enjoyed sometimes walking to work, which also takes half an hour, the distance which Sandra sometimes walked after dropping off her older children at school, on to the leisure centre in the neighbouring borough, when her youngest child would still go in the buggy. Helen's husband likes walking and cycling and often walked longer distances.

*"Whereas I use the car a lot, my husband doesn't like to drive. So he'll take the tube, the bus or walk* [laughs]*. You know, journeys that I would be like 'no, I'm not walking that far', he would walk, you know like from our house to the Boleyn football grounds* [5 kilometres] *to see a football match, you know? That's just weird* [laughs]*."* (Helen, H11)

Several interviewees liked walking and preferred to walk over taking the bus. However, due to time constraints and distances, many drove for most of their journeys. Tina (H6), although mostly driving everywhere, actually loved to walk.

> *"I prefer to walk, but if I don't have time I will go in the car. I don't generally take the bus. I really like walking. I sometimes even walk to Westfield* [a shopping centre, approx. 1 hour walk from her home]*."* (Tina, H6)

Many parents, apart from their worries about safety, liked cycling as an activity and experience. Especially several of the fathers working full-time in Central London cycled to work and emphasised how beneficial cycling as an activity was for them. Leonard (H12), Laura's husband, for example, had recently started cycling to work a few days a week. He originally started cycling to increase his fitness, but also enthusiastically described the benefits for this mental health:

> *"(…) you cycle, you'll have a better day at work, no doubt - you feel better about it. And everybody who I speak to says the same thing, is that day is a much better day, whether it is just endorphins or whatever, you start your day much better."* (Leonard, H12)

However, cycling was also perceived as challenging, necessitating confidence, concentration and physical fitness. Cycling was often perceived as strenuous. Paula (H19) said she felt too unfit and too tired to focus to go out cycling with her children and for it to be a safe and enjoyable experience. Vanessa (H5) said she wanted all the family to be able to cycle together. She thought however that it would take them several years to become proficient riders.

Furthermore, cycling can be physically uncomfortable. Bianca (H13), who liked cycling and whose family didn't own a car, pointed out that cycling was not unproblematic, as it often involved getting sweaty and sometimes getting dirty, which is why comfortable clothes were the most practical to cycle in for her. While Bianca cycled anywhere, when she and her husband went out for an evening, she might not necessarily want to cycle.

> *"*[Her husband] *would probably cycle anywhere, whereas if I'm doing my hair, putting make up on or want to wear heels or something, then I think, I'm less*

*keen to cycle* [laughs]*. So yeah, it would probably depend on what we're doing and if we were going to drink…"* (Bianca, H13)

Leonard (H12) had started and enjoyed cycling to work around twice a week, however, needed to shower after cycling. He mentioned the lack of shower and changing facilities at his work place, which meant he needed to have a gym membership near the office which he perceived as a hassle. Cyclists might however not necessarily need to shower, he pointed out, especially those living closer to the City, cycling from Hackney or Islington, who could manage the journey 'in a suit'. Another, more positive cycling experience for Leonard was using the London bicycle rental scheme, which provides rental bicycles to take out from and return to a number of docking stations throughout London, and which, due to its ease of use, Leonard credited with some of the uptake of cycling in London, including his own. He also encouraged his staff to use the bikes, with his company paying for their subscriptions, which had turned out to be a quicker and cheaper way for his staff to get to meetings than going by taxi, although wasn't considered practical if it rained.

Driving by car was rarely talked about as an enjoyable experience, but more in terms of practicality (the convenience of driving; '*I just nip/jump in the car*'), as well as the stress of packing children and things into the car and having to deal with delays due to congestion. Also children being given lifts by other parents caused logistical considerations involving the use of objects. Bianca's family (H13) didn't own a car. Their older child needed a booster seat when going in a car, and while Bianca found to be usual to some extent for families in their local car culture to carry spare car seats in their boot, she always needed to double check and sometimes her daughter had to remember to take her own booster seat to school if she was picked up by another parent.

Debra (H8) was one of few interviewees who described the types of drives that she liked and disliked. She didn't like her drive to work in the morning as she then had to think about the day ahead, but she liked driving home. She also didn't like driving on cold and dark winter nights, but thought that it was quite nice to drive home from work during Christmas time.

Parents also regularly reported their children's preferences for everyday travel modes. Many children liked public transport and their parents at least sometimes went on public transport with them, even though they didn't prefer it themselves.

> *"And they enjoy the bus, it's their preferred way of getting to school, it's a treat to go on the bus. It means that we'll get there a little bit earlier, in theory we go on the swings in the park and then we go to school.*
>
> *That being said, this morning we waited twenty minutes for a bus in the cold, so we were a little bit late for school, so it's out of my control, it's not that easy taking the bus. It should be but it means that we have to leave twenty minutes earlier than if we went in the car, and twenty minutes when you've got three young kids and you are getting them dressed and everything, is quite tough, you know."* (Emma, H9)

**Conclusion**

Through the analysis of the interviews, main and secondary, contributing factors influencing family travel behaviour could be identified. The most important factors influencing travel behaviour, their number and combination, varied for every family, and single factors were rarely clear predictors of travel behaviour across families. For example, travel behaviour was generally more demanding and difficult for families with three or more children. This was the case for two families and contributed to these parents driving everywhere by car. However, Emma (H9) was so interested in physical exercise that she still tried to and sometimes did cycle with her three children to school, taking one child on her bike, one in a bike trailer and the third one on his own bike.

Attitude-related individual preferences for or intentions to use transport modes as factors, which previous research often focussed on, were not found to be the main influence on how families actually travelled. Many parents, often influenced by positive experiences or imagined potentials, mentioned that they would like to walk or cycle more. However, other factors were found to override such intentions when it came to the mode of transport they eventually used and their travel behaviour generally. A family's space-time constellation, i.e. the number, location and timing of the activities family members aimed to travel to within their available time, often

determined the mode of transport that was most practical, which in many cases was the car. Attitudes, in close relationship with local cultures and social norms however, did play an important role in the conception of families' space-time constellations, through preferences for activities leading to the need to travel to particular destinations.

Ultimately, it was not useful to distinguish influencing factors as 'individual', 'social' or 'contextual', and isolate them. For example, factors associated with individual attitudes, were at least influenced, if not determined by their social and contextual environment. Factors such as school choice might be seen as individual (parents can freely choose children's schools), however this 'choice' was influenced by parents' social environment, as well as the wider societal and economic context, in which for many families the choice of right or wrong school was perceived to be crucial for the future wellbeing of their children. Also, not least, individual attitudes and choice of school were limited by their context as parents either had to live very close to a popular school, be able to pay for it (in the case of fee-paying schools), and/or their child had to be able to pass exams or fulfil other entry requirements such as church attendance.

In summary, travel behaviour and the exact combination of factors influencing it, differed more or less for each family, however, a broad hierarchy of impact of some common main and secondary factors could be identified. I studied every family's travel behaviour in-depth, as embedded in their everyday life and as talked about in the interviews. From relevant factors that I noted, I concluded which ones influenced their travel behaviour most, or put differently, which factors were leading to most of a family's car use. I called these the main influencing factors. I could show that there are a number of different factors at play, however that some factors were more directly leading to large car use volumes than others, respective of family case. I therefore categorised the factors that I found into main and secondary factors.

From the analysis of the cases, I found that in the majority of cases, the factor which mainly influenced family travel behaviour, i.e. was causing most of the car travel was a family's space-time constellation. For example, in many cases, most of a family's car journeys were due to their initial school choice not being in walking distance. This led to car journeys usually between ten and twenty minutes each way to school and

back, on every weekday. A long distance to school often also led to after-school activities in similar long distance to home. Going to a school with a wide catchment area could also lead to a similarly spread circle of friends for the children. School and after-school activity choices, combined with the problem of working hours not matching school hours, were mainly responsible for complex space-time constellations leading to extensive car use. Factors influencing activity choices in the first place, such as parenting cultures, were identified.

However, other main factors (such as strong car-limiting policy, parents' special interests, and parents' mental health) also influenced family travel behaviour. Compared to families' space-time constellations these other main factors caused most of the volume of car travel less often, but they were still found to be main influencing factors in some cases, and often either overrode space-time constellations or reinforced them. These other main factors therefore need to be considered when trying to affect changes in travel behaviour towards more sustainability, i.e. reduced car travel.

There were also secondary factors (such as the need for a car for leisure travel, what cars were bought, and material and emotional experiences of travel) that could be identified. These were not found to be directly responsible for extensive car use, however, could contribute to it. Some of these factors also bear great potential to more strongly influence travel behaviour towards more sustainable patterns, if circumstances, including related to main influencing factors, changed. These secondary factors therefore also need to be understood when trying to change family travel behaviour.

In the following chapter the focus is on those findings of the interviews which show how travel behaviour is embedded in family everyday life. Together with the knowledge of which factors have the most influence on family travel behaviour, the understanding of interrelationships of everyday travel and families' wider everyday life is necessary to identify how travel behaviour could change towards more sustainable patterns.

# 6 Interview findings – Family travel behaviour and everyday life

Having revealed the main factors that influence family travel behaviour in the previous chapter, this chapter turns to how family travel behaviour is embedded in everyday life. In the following sections, different dimensions of travel behaviour as part of family everyday life are presented.

Firstly, travelling with children is particular, due to children's ever-changing developmental stages and related physical and cognitive abilities. Secondly, everyday life, especially of families with children, is characterised by relationality, that is, the impact of relations with others. Thirdly, a main feature of family everyday life is the co-ordination of everyday activities and tasks, led by family needs. In order to deal with fluidity and often friction, part of everyday life, family members employ coping strategies. All of these characteristics of everyday life in families, together with the knowledge about the factors influencing travel behaviour (presented in Chapter 5), need to be considered to better understand how travel behaviour is embedded in family everyday life and how it could change.

Finally, this chapter concludes by presenting the impact of changes in families' everyday lives on their travel behaviour, before outlining how family travel behaviour could potentially become more environmentally sustainable.

### 6.1 Travelling with children

The study's focus on families helped to reveal many of the particularities of travel behaviour unique to families, compared to individuals or other groups. Travelling with children can have special characteristics such as children tiring more easily, not being able to travel independently or needing special equipment for their conveyance such as pushchairs and child seats for cars and bicycles not to mention other paraphernalia. Helen (H11) vividly remembered the time when her children, who were 7 and 4 years old at the time of the interview, were babies, describing the travel experience as both practically difficult and as promoting feelings of stress as well as enjoyment:

*"Every age has its own challenges, but the most difficult time is when they're babies because you have to carry so much stuff! You wouldn't believe it. You know my godson is three years older than my oldest* [who is 7 years old] *and once my friend said, 'I can't believe it! I'm finally free of the nappy bag!' And the nappy bag doesn't just carry the nappies – it carries the whole world inside there, you know, the snacks, the three changes of clothes, the nappies, the drinks, the this and that and the other, and toys and you know, and the buggy, it's lots.*

*And trying to travel on London Transport with a baby is a complete nightmare. From there not being enough step-free access, they've increased that because of the Olympics but some of that stuff they've taken away again, to just getting about – it's easier to just throw everything into the car and then you get there, it takes you maybe ten minutes to load the car and ten minutes to unload the car, try not to forget the child* [laughs]*, clicking the buggy to close and all of that lot, so that is the most…*

*But it's also the most tranquil time, because I used to love just walking along, pushing the buggy and the buggy I had was a* [buggy brand]*, so both of my kids could face me, so seeing them, that was nice, just taking walks out and stuff and going through the parks and everything, that was nice, but the madness of loading and unloading* [laughs]*."* (Helen, H11)

A further example of the challenges of travelling with young children came from Gail (H14), who described the practical dimensions of driving and walking with children, as well as related feelings of stress and annoyance:

Researcher: *"How do the children's ages actually influence how you travel? Is it easier travelling around with a baby and a two year old, or does it get harder later on, when they all walk? Or is it always the same?"*

Gail (H14): *"I think it's all different challenges really, I mean I've had a double pram. So when they were little, I used to sort of find it easier to walk places, because one of my big kind of things I hate is getting them all in their car seats. So the car seats…it can be just easier putting them in the pram and just walk.*

*But then it gets to an age when they don't want to go into a pram but they are so slow walking, and you kind of going 'Oh no!'. And then* [more recently] *with my youngest son, he's kind of tired, but if I would walk him down when we pick up my oldest son from school or put him in the pram (…) he would always fall asleep on the way and I didn't want him to fall asleep, then he wouldn't sleep at night, you know what I mean? So it was kind of easier to quickly drive down and put the music on or something. So sometimes, what I do, is driving around, keeping the children awake or trying to get them to sleep, that's another thing I might have done* [laughs]*. 'Right, I take the car' or 'I take the pram, because, then they'll have a little sleep' but then, they won't have a little sleep – so, yeah.*

*So I think each age has its own kind of challenges, but when they were young I found it a little bit easier to just put them into the pram, instead of faffing around with all the car seats. Yeah, that was a big bug bear* [laughs]*."*

Travelling with children was often described as demanding, especially to and from school and after-school activities, and under time pressure. This was often made worse by particularly complicated space-time constellations, i.e. a family's unique constellation of home and destination locations, timings of activities and frequencies of journeys. As already set out in section 4.6.1 (Characteristics and diversity of the interview sample), the general accessibility of amenities by different modes of transport was relatively high for many families. However, the tolerance level of parents in relation to travel time, distance and discomfort was generally found to be low, especially regarding modes other than driving. For most of the families, this meant that in order for them to even consider, let alone put into practice, walking, cycling or taking public transport with their young children, they had to live in locations with outstandingly high accessibility characteristically:

- within ten minutes' walk of school;
- only a very short walk to public transport stops (ca. up to five minutes) and with direct services to most important destinations – for example altogether, not taking longer than additional ten minutes bus journey to school;

- within a ten-minute walking distance from home to a variety of amenities (typically a high street);
- providing a good offer of after-school activities either at their school or close by; and,
- workplaces very close to home or very well connected/in Central London (in order to have time to walk with their children to school before work).

Furthermore, families' travel behaviour was generally conditioned by the challenges that different developmental life stages of their children posed. This meant that a family's use of any mode of transport was constantly adapted to these changes by using different vehicles and equipment. Most parents also discussed the changes in child-related destinations and how this affected the transport modes they used over time. For example, the period between birth and around three to four years old often included travelling with a pram or buggy, which was why most parents mostly drove by car for longer distances, while at the same time some parents tried to avoid the car as much as possible during that period, due to having to load and unload the car and putting children into child seats as too cumbersome (as exemplified in the quote by Gail (H14) earlier).

When children reached primary school age, many parents reported a period when they could potentially have downsized to a smaller car or even driven less- however, they pointed out that this was a difficult consideration because of their desire for a spacious car for moving things (e.g. bikes) and for occasional camping trips. There was a feeling that this could, indeed, change again at later stages, with changes in children's activities. Adam (H10) said that they had bought a large car when his two children were a baby and a toddler, in anticipation that they would always need a spacious car to transport their children and all the 'stuff' they needed as a family. When his children reached nine and five years old, however, he felt that they could actually downsize to a much smaller car, but, for one reason or another, they hadn't done so.

This was common among families where children had grown up. Most had been reluctant to change car sizes, not only because it would have been a major investment as one car had to be sold and another purchased, but also because of the

possibility that they might need this space at a later stage. Zoe (H17) pointed out that her two children were now so tall that they needed a bigger car again for everyone to sit comfortably. Meanwhile, Carl (H15) stated that since his children were at school, he and his wife had only needed a car for very few child-related escort journeys in the week. However, because the children had just started to go to scout camps in the region, this meant that they had longer journeys to make at weekends, which they felt were only possible to make by car, unless they were able to arrange lifts with other families.

> Researcher: *"(…) there are different mobility needs for the different age groups of children, it seems ever changing…"*
>
> Carl (H15): *"Yes, I mean now that my son is going away on cub camps and things like that, and my daughter is going to go away for a camp soon, through rainbows, (…) and obviously getting the kids to organisations like that - yeah, we might lift share with people who we know to actually get them there, to a slightly further away location, that's ok. But actually, two years ago, they weren't doing that stuff. And then all of a sudden, yes, they're doing much more of that. So you've got to get them out there, and do that. Yes, it does change quite a lot."*

Cycling was also a challenge for families with children. Many families who wished to cycle with their children, had experienced irritating gaps in cycling due depending on their child's stage of development. For example, in primary years when a child may be too heavy to carry in a child-seat or cycle trailer but not yet able to cycle independently alongside their parent.

> Bill (H13): *"(…) the fact that we cycle with our children to lots of things, not just to school, is what it makes it interesting. And more complicated because my son will probably start up at that school in September. And he's not ready to cycle that journey yet, so yes, how are we going to work that? We're still working on his cycling skills* [laughs]*."*
>
> Researcher: *"Would you be able to have him in a bike seat?"*
>
> Bill: *"Well, you know, most bike seats are set up for age one to three. He's four, and he's also a very big four. We've got a trailer at the back, which still*

*works fine. My wife finds it quite heavy to pull him behind. And yeah, by the time September comes she's not keen to just dragging him to school, to go under his own steam would also be quite good, so…"*

Researcher: *"Could he go on a scooter or is that too slow?"*

Bill: *"It is too slow."*

### 6.2 Impacts of relationality

The interviews revealed that it is important to consider people, other than parents, who are involved in family everyday life. Many of the families had childminders, nannies, friends, neighbours or relatives involved in, not only in childcare, but also escorting their children. This often had an impact on how other family members travelled.

Single parents often had to negotiate their children's travel with their ex-partner, or new partners and family members who were involved in childcare but not living at the same household. Nicola (H1), who is a single mother, relied on help of family members on some days of the week.

> *"On a Wednesday* [her ex-husband's] *mother picks* [her children] *up in the car.* (…) *And then on a Thursday – quite complex – but* [her ex-husband] *will take them to our friends who live near here, drop off [younger child], pick up* [their friends'] *son and go with* [older child]*, their son and another child on the route, and they'll walk to go to a gym class on Thursday morning.* (…) *My son will go in the car with* [their friends'] *other child.* (…) [laughs] *It's a matrix of organisation."* (Nicola, H1)

While most families occasionally shared lifts of children to school or after-school activities with other families, only a few had regular arrangements. Giving lifts and travelling with family members, relatives and other members of the community, was for some interviewees, a part of caring for them. This could amount to large amounts of travel which was the case for some of the interviewees. Janet (H3), for example, often gave lifts to friends of her children. She also gave lifts to nephews and nieces and generally to relatives who didn't drive. While Janet admitted that, once her children were a bit older, she might be able to do with a smaller car, but in the

meantime she still needed a large car in order to fulfil family obligations: *"I think when you have got a big family, you need… you kind of need a big car."*

Children's changing abilities as they grew up and also their preferences for different types of travel also influenced family travel behaviour. As mentioned in the previous Section 6.1 (Travelling with children), children's capacities for walking, cycling or even sitting in a car limited the amount of travel that parents could do. Furthermore, children developed their own preferences for certain travel modes. For example, many parents talked about their children's preference to go by public transport.

Parental travel practices also influenced children's travel behaviour. If parents liked walking for example, and encouraged their child(ren) to walk, then this became normalised behaviour. Vanessa (H5) for example mentioned that she always walked with her children, while they either walked or used a scooter, from nursery age, into primary school age whatever the weather:

> *"*(…) *they are so used to walking, you know, we've always done it. When my little boy started at [school nursery], he was just over three and he always used to, and my little girl, there is only fifteen months between them, but she was still in a buggy then and then I had a buggy board for him, but not long and then he had his scooter. And then since she started there three years ago, they've always gone on their scooters. Then she used to go to a day nursery in South Woodford so we used to walk to school with him and then take her to the day nursery and leave the buggy there. So, no, they've always been used to walking. You know, it's an easy walk down a straight road."* (Vanessa, H5)

Parents typically shared the responsibility for the everyday co-ordination of family life, including everyday travel. Vanessa and her husband (H5) shared taking their children to activities at the weekend, and while she walked wherever possible, her husband always drove in their second car. Vanessa believed they didn't need two cars, and that her husband didn't need to always drive to activities. She compromised by going by car whenever the whole family travelled together. Vanessa and her husband also negotiated differences in opinion about secondary schools. Both agreed that they wanted a good school for their children. Vanessa preferred the school that was within walking distance, to avoid her children having to go on a bus or underground train, which would take longer. She was also concerned about

congestion, as she anticipated that she would still have to pick up her children from school on a regular basis. Her husband – who wasn't involved in the logistics of the school run – emphasised, however, that he would like their children to go to the best school possible even if this meant driving to a school further afield.

There was also different opinion among parents on the issue of cycle safety. Typically, one partner would be in favour of cycling on the road or on pavements and felt that cycling with children was safe if done responsibly. The other partner would express concern that cycling with children on roads was too dangerous and they often didn't cycle with their children at all. Moreover, the parent who didn't cycle was rarely convinced by the cycling partner to start cycling. A rare exception among the families studied was Tina (H6), whose husband loved cycling to work and for leisure (including for triathlons). She was interested in cycling more, and even to cycle with her husband and children when they went for their triathlon training. At the second interview, Tina remembered having joined the rest of the family a few times, however, this hadn't become a regular event.

While family members respected each other's diverging view on cycle safety, this could still provoke feelings of anxiety on the part of the non-cycling family member. Tina and her husband were a case in point. When asked whether there was anything that would improve Tina's everyday life, she answered:

> Tina (H6): *"No, I wouldn't want to change anything. Well, maybe, maybe I'd stop my husband from cycling to work. Because I worry every day when he sets off to work and when he calls me that he's leaving I worry until he gets back. I am relieved every day when I see him. Because he has been knocked off his bike, four or five times.* (…) *It was horrible. He hasn't been really badly injured, just a little bit, but not badly. But then I understand he needs to do it for his fitness and sanity."*
>
> Researcher: *"Couldn't he take it more leisurely and take more time to cycle?"*
>
> Tina: *"No, he wouldn't. He's a good cyclist, he is going fast - it's frightening."*

Anita, Adam's wife (H10), stopped cycling to work after a period of regularly cycling into Central London to work and experiencing unsafe situations. She had decided not to take up cycle commuting again since, even though she now worked in a different

location in outer London with better cycle routes. Adam expressed his satisfaction and relief with Anita's decision, as he had believed cycling was unsafe and was always fearful when she used to cycle.

### 6.3 Everyday co-ordination of modern, fragmented, individualised lives

Many interviewees described the time pressure that characterised their everyday life. The following exchange with Laura (H12) exemplifies this.

Researcher: *"So what would you say, do you manage quite well with your daily organisation and the children, or do you feel under time pressure?"*

Laura (H12): *"God, there's always time pressure. I'm a pretty organised person. Yeah, I mean if you work and you have children, you're always…you live your life by the watch: time to get to school, time to get to work, time to pick them up, time to feed them, time to put them to bed, you know, it's constantly…, you're governed, your whole day is governed by where do I have to be at what time, so there is time pressure but we got kind of routines embedded, and we all kind of know what we're doing, so yeah, we operate…yes, it works. Of course there's hiccups, for example this week my son was ill, that's always difficult, 'who's going to be home, who's going to do this, who's going to…'. But that's life, you know, so it's never always going to run smoothly, but pretty much, pretty much, you know."*

The studied families' everyday lives can be regarded as highly fragmented and individualised as every family had different work-patterns, as well as activities with different times and locations to travel to. The time fragmentation in families' lives was contained only to some extent, as most parents adhered to the same main obligations framing their days, such as when to get up in the morning in order to be on time for work and school, and when to get home in the evening for children to have dinner and get ready for bed.

Parents often reported being very busy and feeling pressured for time. This was especially true of working parents, who felt that they suffered from the mismatch of work and school hours. Particularly time-pressured periods were the morning, from waking up to arriving at school or child care facilities, followed trying to arrive at work on time. Time-pressure could also be experienced at the end of the school day or after-school activities, e.g. there was often little time available between picking up

children from school and the start of after-school activities, which were often not in walking distance. Likewise, parents often rushed home after picking up children from after-school activities, in order to manage dinner and bed time on time.

These time-pressured periods were usually considered by parents, and organisational strategies usually functioned well for most parents, although many described it as still quite stressful. For example, Tina (H6) described her walk to school every day:

> "[The walk to school takes] *about four to five minutes – depending on how much shouting I do 'Come on, you're going to be late!' [*Laughs]. (…) *nearly every morning when I walk to school the traffic just gets completely jammed. And there's people getting out and shouting at each other. And sometimes they're like fighting and stuff* [laughs], *all swearing at each other, because they're all so stressed that they're late, and it's just…".* (Tina, H6)

The fragmentation of everyday life was often compounded when families had complex co-ordination that involved other people. Adam (H10) explained the complexity of coordinating family logistics depending on a number of different scenarios:

> Adam (H10): *"So, anyway: a typical day…what is a typical day?* [laughs] *They're all a bit different. Because where school is. We didn't get into our nearest school, that's why they go to* [school's name] *over there.* (…) *So, on a typical day in the wintertime, because it's different in the summer, when the weather is better we can walk to school, but in the winter, ehm, we have different arrangements for different days, because, there is a woman around the corner, her son goes to the same school, there is another woman actually who lives two doors down, her son goes to the same school, so we kind of have a child…, a sharing arrangement with the woman who lives around the corner.*
>
> *So she is an air hostess, so she kind of works odd shifts. But when she's in the country, we will send our kids around to her house and then she would drive all three of them to school. They would go quarter past eight to her house and then she would take them to school. And in the evening what would happen I think Monday and Tuesday, the…hm, I can't remember what the arrangement is, it's so complicated…ehm, Mondays, my wife picks them up from school.*

*Tuesdays, they go to after-school club. Wednesdays, I pick them up from school. Thursdays, I think they go to after-school club. Fridays, my wife picks them up from school."*

Researcher: *"So you only pick them up on Wednesdays?"*

Adam: *"On Wednesdays, yes. But if the lady who is taking them to school is not around, normally it will be me who takes them to school. My work is flexible. But it means that by the time I got to school and waited for them to go in and stuff, I generally get to work between quarter to ten, ten o'clock, something like that."*

As much as Adam was happy to be able to share the school run in order to reduce the number of journeys he had to make, he was very stressed by the ever changing arrangement and would have much preferred a more stable routine.

*"Ehm, I like…personally, I like routine* [laughs]*, so I'd like everything to be the same every day. In terms of taking the kids to school, I'd like to know if I definitely am doing it every day or not, I just find it easier that way, I don't know why. I don't like it being different every day.*

*But we share the school run with our neighbour, and her shifts are what they are and we have to work around that. So when she is in the country she will take the kids every day – and sometimes that works quite well for us, like the whole of January basically she was at home. But she was away quite a bit of February and then I was taking the kids to school then.*

*Where I work, there's an additional kind of pressure: there is not a lot of space inside the building. And if I get there late, then chance for me to actually get somewhere to sit are quite…* [laughs]*, because it's flexible desking.* (…) *Plus when I get to work late, I will finish late and be home late."* (Adam, H10)

Similarly, some of the parents with more than one child told of the problems co-ordinating everyday life around the different activities of siblings, which again could contribute to more car driving. This is partly due to the generally high number of activities and childcare destinations, in a variety of locations, as well as different start and end times for different places or activities. For example, ballet lessons for three-year olds might take place at the same location than the ones for five-year-olds, albeit

at different times. This was experienced by Karen (H16), who therefore drove to or from her two daughters' ballet school numerous times of the day they held their classes.

Everyday life co-ordination was not necessarily any easier for those who were not in paid employment. Indeed, the frequency of journeys from the home often exceeded that of working parents. An example is Janet (H3), a busy single mother of two young children:

> *"I think if I could improve anything, there wouldn't be any problem with parking. There wouldn't be any paid parking – that's very idealistic – there wouldn't be any fines or tickets. Because as a full-time mother I have a lot to do in the day – probably more than somebody who's working. So if I need to get from A to B and C to D, I always have to think 'Ok, what am I going to do, I have to plan it out the day before, get here, pay for this and that…*
>
> *It would be nice just to get in the car, drop off the kids, go where I'm going, do what I'm doing, come home, you know? That would be much better. And on the other side, when the weather is better, it would be nice if I just could take public transport and there's no problem, it's straightforward, it just goes the route of the car. That would be perfect. And you know if it was at the time that I wanted."* (Janet, H3)

Complicated everyday arrangements were also prone to further complication due to unanticipated disruption. Frances and her husband (H7) worked in a town centre several miles from their home and decided to send their children to a nursery near work. Since then, their older a child had started at a primary school local to their house (however, a large roundabout and associated traffic jams on the way made it harder to drive to school than to walk), and Frances had stopped working. This meant that her husband now took the younger child to nursery. However, as he was frequently travelling for work, Frances on these days had to drive twice a day to the town centre for no other reason than to bring her child to nursery. In addition, she also drove a lot to help her parents in law. The researcher asked her whether she felt any time pressure.

*"As long as I know what I'm doing in the day, there's always time to fit it all in, that's not a problem. Obviously, I've got the added pressure of looking after nanny and granddad at the moment because they can't drive because of the knee operation…so yeah, I think I've always got plenty of time to get to where I need to go.*

*Obviously, you've got to factor in for a lot of the traffic, so on a round trip on the days when my partner is away, I can easily spend three hours in the car, easily. Going to* [town centre]*, coming back, taking granddad to physio or whatever, because the car keeps a count up on how long I've been in it during the day, and it shocks me sometimes, you know 'three hours and twenty-one minutes', I could have gone down to Devon to see my mum in that time* [laughs]*."* (Frances, H7)

Few respondents had maintained the busy lifestyles they had before starting a family. Helen (H11) travelled by car to and from her two part-time jobs, visited a large number of relatives all over East London on an often daily basis, and helped out on her mother's market stall in her leisure time. This was in addition to sharing childcare duties with her husband. She drove everywhere by car. Similarly, Janet (H3) was very busy visiting and giving lifts to relatives and members of her local church community.

### 6.4 Everyday life as a pursuit to meet family needs

Families' everyday lives revolved around meeting family needs and were found to significantly influence travel behaviour. Family needs can be conceptualised as derived from the main factors influencing the travel behaviour of the families studied, and crucially the factors which led to these in the first place. These were often social and emotional factors, e.g. social norms. It emerged that being there for their children and other relatives (such as parents), keeping children safe and making sure they went to good schools and after-school activities were the main preoccupations for families. Furthermore, going to work, to earn an income and for self-fulfilment, was very important for families. Parents might also experience mental stress which they would try to minimise often by driving rather than use other modes of transport.

There was often dissonance and trade-offs in relation to parents' priorities and their children's' activities. For example, many parents would have liked their children to

walk and cycle for physical activity, but this was prevented by parents' priority of the need to choose a good school, which wasn't in walking distance. Or parents decided to drive their children, as they considered walking or cycling as too dangerous. This indicates that the ability to meet social and emotional family needs often also depended on practical aspects of travel. Furthermore, as introduced in section 5.4.2 (Travel as material and emotional experience), the material experiences of travel could also have an impact on what needs families prioritised.

This effectively meant that families only used other modes of transport or reduced car use where these wouldn't interfere with meeting their primary needs. Car use can therefore be situated in the context of family members' life priorities and ambitions, i.e. their family needs. Driving was often the mode of transport that worked best to satisfy family needs, and in the process often led to 'car dependence'.

Another example for a need the fulfilment of which was often overridden by other needs, is environmental awareness. Less than half of the families interviewed expressed their awareness of the negative environmental impacts of car use, and environmental concern was rarely an influential factor on these families' travel behaviour. In most cases the respondents' perceived practical requirement to use the car had a stronger influence. When families actually did consider walking or cycling, this was often primarily to gain physical exercise for themselves and especially for their children. Paula (H19) and Nicola (H1) were both environmentally aware and felt guilty driving so much, but admitted that they had consciously sacrificed being environmentally friendly in order to put their mental health as well as their children's education first (both had chosen schools which weren't in walking distance):

> Paula (H19): *"*(…) *But because I've got the car we don't have to go to the nearest park* (…) *again, stops me going gaga. If I'd have to go to the same park again and again*, (…) *but at least with the car I have the freedom* (…)*, and it keeps me sane. I mean, morally it's questionable, I shouldn't be driving around everywhere in the car, but you know what, at the moment, I am in complete survival mode and it's really about how I'm going to get myself through the kind of four or five year period when [her two children] are both little."* (…)
>
> Researcher: "*So you get a huge benefit from* [her car]*?*"

Paula: *"Oh yeah, inexpressible, it saves my life every day. And that car is about my children being liberated from having to go to a crap school. So it's vital for them as well."*

Despite private car use often winning out in the choice of travel modes, families often expressed that this driving was hardly ideal. For example, parents often mentioned the lack of physical activity while driving and also that it meant that they spent less quality time with their children, in contrary to other modes of transport, especially walking. But although walking has the potential to meet important emotional needs as well as being physical exercise for the children and developing their traffic skills, this appeared to be usurped by car dependence.

Regardless of which modes families used for their everyday journeys, they had to navigate obstacles to managing space-time limitations as well as any obstacles related to the material and emotional experiences of everyday travel and modes of transport used. To achieve this they used coping strategies. Driving was one of the most effective coping strategies that families employed. However, as most families were not necessarily especially keen on driving nor completely closed to using any other modes of transport, driving was often only a response to obstacles to preferred transport modes such as walking, cycling or taking public transport, rather than a choice.

Studying coping strategies did not only give an indication for how important their prioritised needs were for families, but also where the obstacles of typical everyday travel practices lay and how families navigated those. This is interesting knowledge when trying to better understand how travel behaviour works and how it could potentially change towards the use of more sustainable modes of transport. The following three sections detail the coping strategies employed by interviewees.

### 6.5 Families' coping strategies for everyday travel

In order to deal with obstacles posed by everyday life, families employed coping strategies. These can be categorised into three groups (which are presented in the following sub-sections): Coping strategies for space-time limitations; coping strategies for the material and emotional limitations of transport modes; and, coping strategies to make sense of travel behaviour by using narratives.

### 6.5.1 Coping with space-time limitations

Coping strategies to make everyday travel to preferred destinations work within the given time and spatial parameters, were often practical, e.g. using faster travel routes or other time-saving measures. However, the spatial parameters can also be influenced from the outset.

**Moving close to preferred schools**

One coping strategy which can potentially determine a family's space-time constellations from the outset, is to move close to the preferred school for the children, resulting in one of the main family everyday travel destinations being in walking distance, and in a large number of everyday journeys to potentially being walked. However, in areas around popular schools, property and rental prices are usually disproportionally high. This is an often criticised side effect of admissions policies of schools based on distance criteria. Many of the interviewed families could have potentially afforded a property near the best schools in the study area, and school choice had played a role in the choice of where to live. However, parents had rarely chosen their home location based on a preference for particular schools, but had moved into the general area, aware of its reputation for good schools.

There were several reasons for this, including buying a house before their children went to go to school or even before they were born, and a limited choice of houses available to buy. Other factors than schools were often stated as equally important in a family's choice of area, such as proximity to an underground or overground rail station for work reasons. Many parents moved closer to their own parents and other relatives. Also, parents knew that any school's achievements and reputation could change within short time, and therefore chose to buy in a general area rather than next to one specific school. Furthermore, some parents also tried to increase chances of their preferred secondary schools, by living within the school catchment area.

Carl and his wife (H15) were an exception as they had actively pursued the strategy of moving close to a specific school. They had been living in Central London when they had their first child and decided to look to buy a house further out, in an area with good public transport connections and around half the distance again to Carl's parents' home outside of London. They narrowed the area to the study area,

specifically because they wanted their children to go to a school with very good Ofsted ratings, as well as a student intake with a balance in ethnic backgrounds among children, and preferably a majority with English as their first language, which might not have been the case in adjacent areas. They found a house they could afford very close to the faith school which their children then went to. Carl also stated that they were prepared to move again in order to secure places for their children at a preferred secondary school.

**Negotiating family friendly working hours**

A significant obstacle to managing everyday journeys on time which was the mismatch of work and school hours. Most parents in the sample tried to organise their work patterns to minimise the time that their children were in childcare. Most fathers however still worked full-time and long hours. Mothers often either gave up work for a while or returned to part-time work after maternity leave. Most parents only looked for employment in places where the commute wouldn't exceed a limited amount of time. One mother chose to work at a school to be able to work around school hours and during term-time only. Another mother chose to do voluntary work for the same reason. Karen (H16), who worked as a teacher, said that she was lucky to arrange shorter working days with her employer, i.e. working four days' hours over five days, which meant that she could pick up her children from school on three days each week, without needing after-school care. This arrangement however also meant that she had to go to work on one additional day, which also added two more commuting journeys by car to her weekly number of journeys.

Nicola (H1) worked in a paid position and when she reduced her hours to two full-time days in three days, was able to negotiate two of her working days to be only four hours long so she could take and collect her children to and from school. She mentioned however, that such an arrangement was mainly possible due to her very high level of specialisation and relevant industry experience, and that her employer had worked with Nicola before, highly valuing her expertise. Several parents stated that they would rather reduce their hours of work and forfeit some of their income rather than having to work full-time, because of wanting to spend more time with their children. Bianca (H13) worked long days but found that she couldn't spend enough time with her children, so she had cut down on her hours, despite the

family's income already being very low. She explained that she would always, "*try to fit work around her children not the other way around*".

Not working in paid employment or working within school hours, didn't automatically mean that parents used more sustainable modes of transport, as there often were other reasons for driving (see sub-section on 'Impact of work related factors on travel behaviour' in Section 5.2.3 'Underlying factors of space-time constellations: Work', Chapter 5). However, it increased the likelihood of doing so, as parents might not have to rush as much, i.e. had less time-pressure. Vanessa (H5), for example, worked voluntarily two days a week within school hours and lived in walking distance to school. She went to work by bus. While her working little and around school hours helped her to do so, other important factors were clearly her interest in walking and everyday exercise, which meant that she was happy to first walk ten minutes to school and another ten minutes on to the bus stop. An example for where working within school hours didn't mean less driving was Paula (H19), who worked voluntarily at her children's school, however due to the long distance to school in the first place and her difficulties of coping with her two active children, she always drove to school.

**Relying on childcare and help from friends and family**

Some parents had arranged further childcare in order to be able to work more hours. Frances (H7), for example, had put her daughter into a nursery close to her work which was located ten miles from her home, so that she could work longer hours without increasing the already long hours her daughter needed to stay at the nursery. Other parents used childminders, or divided bringing and picking up duties among themselves, with help from family, friends or neighbours. Generally, this way of coping with the work-school hours' mismatch, despite being effective, still often resulted in stressful arrangements, with parents rushing to and from work.

Some parents used occasional lift sharing arrangements with other families to reduce their need to travel or in some cases to be able to manage the work-child care logistics at all. However, sharing lifts was usually only considered among parents who already knew each other and lived close to each other. Also, most parents seemed to have their own, sometimes complicated and time-pressured routines of dealing with their children's everyday travel and didn't seem to be keen on having to consider another families' routines which is necessary when lift sharing. Lift-sharing wasn't an

entirely reliable solution and was contingent on others and therefore was at risk of disruption due to competing demands of work and potential days off due to ill health. Nicola (H1), a single mother who depended on help from her social network, pointed out that it took a good personal relationship among sharers with everyone being flexible and helpful to master such last-minute changes.

> *"And you know, part of a successful work-life balance for any working parent is the continuing exchange of favours with other parents. So* [her friend] *who brings* [older child] *back from sailing on a Thursday, she's another single mum. She's now doing a course which involves evening stuff on a Thursday, so I said I can have her daughter on a Thursday. So you know, this is the kind of constant… - and the car becomes kind of currency, I mean* (…) *it's not like anyone is keeping note of who owes who* (…) *but certainly it's advantageous if you can be in that ecosystem of exchanging lifts and favours.*
>
> *I mean obviously there's the occasional thing where it doesn't work out because somebody is ill or… and then you just on the fly have to sort something else out* (…)*.* [But] *it always just seems to work out* (…)*, we basically just make a judgement on who it is going to be more of a ball ache for, really."* (Nicola, H1)

A rare exception to most time-pressured families in relation to childcare arrangements was Adam and Anita (H10). They had taken their sons out of their school's after-school club because they were unhappy with it. Instead they hired a nanny who picked up their children from school and looked after them until 6pm every day. Although their school offered childcare from 7:30am till 7:00pm, they had opted out of the school's breakfast club and instead had an arrangement with a neighbour who took their children to school. Still, the children were driven to school every morning, as this was their neighbour's preference. The nanny took the children home by bus. Adam worked in Central London so didn't have the option to drive, however, had they not had childcare around school, Anita might as an alternative have driven to work just in order to also take their children to school on the way.

Interestingly, at the first interview, when they had decided to move their children to their new school, but hadn't started them there yet, both Adam and Anita had been

impressed by the school's wraparound childcare offer, which they since had opted out of, as they were not satisfied with the quality of childcare:

> *"And the other selling point is that they support working parents. They say that it would be possible – and we don't want this for the boys – but it would be possible for you to have your children on site from seven thirty in the morning to seven in the evening for all but two weeks a year. We're not going to take up on all of the offer but it's nice to have a school that starts with the attitude that understands that there are parents who work and doesn't expect mothers to stay at home, you know, collecting the children at three fifteen."* (Anita, H10)

For any everyday journeys, the space-time limitations, and often the amount of travel were easily multiplied by the number of children. Sometimes parents waited at school with one child for the other child who had an after-school activity, but other parents travelled home and then travel back once more to pick the child up. Similarly, some children waited while their sibling had an activity and then went on to their own activity afterwards, with the other sibling waiting for them in turn. However parents also sometimes drove to and from the same place three times. Sometimes, parents found activities which siblings could attend together. Also, some siblings took part in activities at the same time but in different places, which especially at weekends often led to both parents travelling separately with one child each to activities.

**Setting out early and rat running**

Rush hour traffic was a common factor delaying parents using a car. Some parents therefore set out very early to and sometimes from work to beat the rush hour traffic and often also to get their preferred parking space (or parking at all). This often meant that they arrived at work far too early. Another coping strategy to beat rush hour traffic was to use back roads to get to school or work. Janet (H3) arrived very early every day at school for the drop off and pick up of her children:

> *"My day is normally that I get into the car, and we get up quite early, because the school's not far, but parking is a problem. And it's not a direct route* (…)*. I've got to go down* (…) *a busy road, so I have to plan my journey. We*

*therefore have to get up early, so we get up about six-ish and we'll leave about eight, because we need to get ready. So we wait at school, this morning we got there at about 8.20am. School doesn't start till about nine. But if we'd left later, we would have been rushing, there wouldn't be parking, we could've got stuck in traffic. So we wait until about ten to nine. Then we go into school and I drop them off. I leave school at nine and then I start my day."* (…)

*"Then wherever I am, be it out or at home, when it comes to 2.15pm, I have to leave to pick up the kids. They actually don't finish till 3.15pm, which means I could be at school at 2.30 or 2.45, but I'm waiting in the car for school to finish, because of the parking."* (Janet, H3)

Karen (H16) also set out very early to work every morning in order to beat the rush hour traffic and to increase her changes of securing one of the limited parking spaces:

Karen (H16): *"Now I moved to my new school in* [a neighbouring borough] *18 months ago and it's a much worse journey because everyone is going that way. So it can take fifteen minutes, it can take half an hour, you know, if you don't go early enough."*

Researcher: *"So you know the busiest times and routes?"*

Karen: *"Yes*, (…) *I know my little rat runs there* [laughs]. *And also, because I set off at half past seven, it's not too bad, if you set off at quarter past eight, you get stuck. I literally leave at half seven because I know I can get there at quarter to eight. I don't have to be at school before quarter past eight, but I know that if I set off at eight I will be there at half past eight, quarter to nine."*

Similarly, Debra (H8) drove to work early on any day when she wouldn't have to bring her child to school:

Researcher: *"How long does it take to drive from home to your work base?"*

Debra (H8): *"*(…) *sometimes I set out very early, so I can set out from here at quarter to eight or half seven, I can get there around eight o'clock. If I set out later, say I drop my little boy off at school, it can take up to forty minutes to get there. Yes, even though it's Wanstead to* [adjacent neighbourhood]. *Mainly because of the traffic and school traffic. It's in the rush hour, that's*

*right. No, I don't go via the Green Man roundabout. I do go via the back way through Wanstead but it's still quite busy. "*

Helen (H11) would consider her route options to work and tried to reduce the stress of driving by using short cuts along back roads that she was familiar with. She talked about her long experience of driving and how she had adapted her routes to enable her to maintain a consistent journey time:

> Researcher: *"So although you now live more centrally* [than further out in the suburbs they first considered moving to]*, it's easier for you to get around by car, because you take minor roads and so on?"*
>
> Helen (H11): *"Yes, yes, because I've lived in East London for over thirty years I know most of the back routes* [laughs]*. For getting back from Hackney, visiting friends there or whatever, I know all the back routes, so I can get back here really quickly, so no, I'm not fazed by any of that."*

Janet (H3) reported that in order to be able to make it to her son's football training after school, she needed to drive by car while her son would get changed into his football clothes in the back seat. Nicola (H1) appreciated that the car gives her the flexibility to drive her children to activities at a maximum distance from home within the time available between school and the latest time that is reasonable for her younger child to arrive back home.

However, there were a few instances where traffic congestion led to parents avoiding driving altogether. Frances (H7) who generally preferred to drive anywhere, regularly walked with her child to school and back, as even she found the time delays due the regular congestion at a roundabout on the way to school unacceptable.

**Scheduling and choice of activities to minimise journeys**

Another coping strategy for some families was to impose time-pressured periods on themselves, in order to free up more time. Helen (H11) for example scheduled both of her children's after-school activities on Friday afternoon and Saturday morning, which meant that she rushed around by car:

> *"It's a bit manic* [laughs]*, it's just kind of worked out that way, we were going to try and do some of the stuff on Saturday but because of the time that their*

> *morning activities finish, it would have been just too much. And for me, it's better to get as many of them in one hit as possible, which means when my older daughter's class finished at half twelve* [on Saturdays]*, if we want to go and see family, or if we want to have a day out, an afternoon out, we can go and do that quite leisurely."* (Helen, H11)

Carl and his family (H15) were an exception to the rule in that they managed to drive very little considering their two children took part in seven after (or before) school activities a week each. There was only one car journey that was made in connection with the transport to these. This was to a large extent possible due to half of the activities taking place at the children's school, which was also only a one-minute walk from the family's house, or at a neighbour's house (piano lessons). However, the family also made a conscious effort, not to use the car unnecessarily in order to save greenhouse gas emissions, which is why they combined the picking up of the both children from their different scout groups with a trip to a big supermarket nearby. They also cycled to and from the children's tennis lessons on Saturdays. One after-school club the children went to once a week picked children up from school by foot, and they also had the help of a friend who took their daughter each week from the after-school club to her scout group.

Everyday life in general, not only around the busy periods in the mornings and evenings, but throughout the week, including any of the large number of activities that families tend to engage with, related to work, childcare, school, social relationships, hobbies, errands etc., involved a large amount of co-ordination. In order to make it to all these activities on time, and because getting around with children takes more time and effort, most parents were fairly well organised, putting into practise, concrete routines. Debra's son (H8) went to a faith school, a thirty-minute walk from home. Both parents worked and had to co-ordinate everyday life around work and their son's school and other activities. Debra said that they had to organise everything, often using text messaging, and that she had, "a *whole diary about it*". Every day in the week was different, due to varying work, school and activity times (and in the case of activities, locations), however, the arrangements were as routine as they could get from week to week, in order to make it work. They also had to work around contingencies such as suddenly not being able to pick up

their son in time. They could fall back on to their former childminder to cope with such occasions. Both Debra and her husband drove to work by car, mainly due to the fact that the school wasn't in walking distance but the car was also useful in order to manage to make everything in time, as their aim was to minimise the time their son would have to stay in childcare.

**Using information to make the most of public transport**

Nearly all interviewees had a positive opinion of their local public transport and some made its use more reliable by employing technology. Emma (H9) for example saved time by using a real time bus arrivals app on her tablet and mobile phone, permitting her to leave the house for the local bus stop closer to the actual bus departure time. Janet (H3) used a bus app on her mobile phone to plan public transport journeys, as well as the Transport for London Journey Planner and Google Maps websites.

> "*Actually, I've got an app for my phone which is like a bus* {inaudible}, *which is quite handy. And I use the TfL* [Transport for London (public transport authority)] *website, it's very good, so I just look it up and print it out. Yeah. But you can use technology now, there's all kinds of… like even on your phone, there's like a map and will tell* you the public transport *routes. Yeah, I think it's just through Google Maps as well."* (Janet, H3)

However, the disadvantage of using public transport compared to the private car was expressed by interviewees - that it only runs on specific routes and at fixed times and that there is sometimes the need to change services. This was perceived to further complicate everyday life because of the coordination required, compared to simply jumping in the car at a time of one's choosing. Janet (H3) for example, explained her the coordination of her journey by bus:

> Researcher: "*So when you go to school by bus, is it one or two buses?*
>
> Janet (H3): *"I normally take one bus, I actually prefer taking two. The way public transport is in London, sometimes it's easier to take two buses rather than one bus. It depends on how tired you are. Because you can take one bus but it goes all the way around. Whereas if I take two buses it will more or less take me the same route that I used when I drive. So we used to take two buses. Now it's cold, the kids are a bit tired, I'll get one bus. Yeah and if we're late it*

*may mean taking the tube. So I'll have to take the bus to the tube station which is a fifteen-minute walk away. And then get the tube to school and then walk the remaining way. And on the way home, because we want to avoid the bus, we'll take the tube."*

**Conclusion**

This section has demonstrated how families dealt with some of their space-time limitations by using various coping strategies. Still, most parents were under time-pressure regardless and many therefore (among other reasons) chose to drive. However, using the car did rarely eliminate families' time pressures, and would often only 'work' when setting out at inconvenient, too early times and using complicated detours.

In summary, solutions which seemed to work best for families to co-ordinate travel to work and school were on the one hand very flexible working hours, i.e. working well within school hours, as well as very high quality, seamless before and after-school childcare, e.g. in the form of a nanny. Furthermore, good quality before and after-school activities offered at school were rare but popular where they existed. These options reduced the time pressure and complexity of daily changing arrangements, as well as seemed to satisfy to a large degree the expectations of parents for good parenting. While less time-pressure didn't mean that families would necessarily use their car less, it sometimes did, and can therefore be seen as a favourable condition increasing the potential for use of alternative modes of transport.

### 6.5.2 Coping with the material and emotional limitations of transport modes

Families had to cope with a number of limitations when using different transport modes. As laid out previously, everyday travel comes with material and emotional experiences which are not always positive, and therefore pose limitations on the use of different modes of transport. Most families came across such limitations and endeavoured to overcome those, depending on how important the use of these transport modes was to them.

**Walking limitations**

Vanessa (H5) mentioned that her children did not complain about walking in bad weather because they had been consistently walking with her first to nursery and

then ever since to school from just under two years old. She managed to overcome the limitations to walking that had occurred at different ages of her children, partly through the use of specialised equipment. Firstly, Vanessa had a buggy board on her younger child's buggy which her older child, who was then only 15 months old could stand on when he got tired from walking. Since the younger child had learned to walk, both children had used scooters which let them manage longer journeys than on foot.

For Helen (H11), rain wasn't a deterrent to walk with her children.

> Researcher: *"Are there other things, like the weather, that* [your children] *don't like going out?"*
>
> Helen (H11): *"Sometimes, but then I tell them to put on their wellington boots and tell them we'll go through the forest and they can jump in muddy puddles… I think it's just a matter of making the experience interesting for them. And I kind of make up a lot of stories when we're out and about walking for example. So I've made up a series of stories for them since they were little. You know, 'new adventures about my older daughter {name} and my younger daughter {name} and their magic scooters'. So they kind of enjoy it for that experience as well. And they often are the ones to drag me out: 'let's go to the park' or 'let's go to Wanstead'. So very rarely would they say no."*

**Cycling limitations**

Despite its large potential due to its relative speed, suitability for typical journey distances and not being that prone to traffic jams, cycling was one of the least used modes of transport on everyday journeys of families. There were many obstacles to cycling reported by families, even and especially by the one family who didn't own a car and had voluntarily made cycling its main mode of transport. Bill and Bianca (H13) both mentioned being exposed to rain and cold as uncomfortable, roads too unsafe to cycle on with their children and little capacity of carrying things while cycling. Cycling with children also involved frequent changing of cycles and cycle equipment, along with their children's development.

In order for Bill and Bianca to cope with some of the challenges of cycling they used several coping strategies. For example, to make cycling work for them on a daily basis

throughout any development related gaps, e.g. when their younger son had become too heavy to carry on both child seat and bike trailer, but not yet able to cycle independently over some distances, they used a number of specific cycle equipment, such as a tag-along (a children's bike without a front wheel which is attached to an adult's bike). Bike trailers and tag-alongs are specialist pieces of equipment which they were only able to afford as they were handed down to them by friends for free.

Bianca noted that it hadn't been easy to manage their everyday co-ordination without a car, which was one reason why she (like many other mothers in the sample) started to work part-time only. It took "*a lot of determination*" to make it work, sharing duties with her husband. These limitations were reinforced through some of the material requirements of bicycle use. For example, on some days with one parent bringing the children and one picking them up, the children's bikes had to be parked at an agreed place, as the after-school club, which the children went to, picked up the children but not their bikes. They also both carried spare sets of keys for the children's cycles in case their children lost them.

Many parents wanted to cycle with children but found it too unsafe to cycle on the road. Some coped by cycling on pavements only, knowing it was illegal, as well as impractical or even dangerous, especially cycling around pedestrians on narrow pavements. Sometimes parents cycled on the road while their children cycled on the pavement, which again was not ideal, as parents needed to look out on the road while keeping track of the children on the pavement. Some parents also reported cycling through parks and green spaces where cycling was not permitted, which they however felt was safer to cycle with their children. In one case the children's school was located in such a park, which meant that the family had to either take a detour on unsafe roads or cycle illegally through the park in order to get to school on their bikes. An important reason why Bianca (H13) and Emma (H9) regularly cycled with their children to school was that most of the route had wide pavements next to the roads that usually weren't busy with pedestrians, i.e. ideal for cycling with children on, and that the rest of the route went through their own quiet residential area on one end and through the park where the school is located in at the other end.

The use of dedicated cycling infrastructure could be a coping strategy for parents wanting to cycle but being unsure about safety. However, many of the few existing

cycle paths were criticised for not being good enough. Bianca (H13) for example, one of the two parents of the family who cycled everywhere, would rather cycle in the middle of the road than use the segregated cycle paths which had been newly installed as part of a 'Mini-Holland' scheme of cycle infrastructure development in a neighbouring borough, as she claimed that some of the cycle paths suddenly stopped and led onto the road, which she found dangerous. Also Karen (H16) wouldn't cycle to work, although part of her route would use the 'Mini-Holland' infrastructure, due to the fact that she was still too scared to cycle on some of the major roads and one large roundabout which were also part of the route, and which didn't have any dedicated cycle lanes.

Cycle parking, e.g. at home was also often so impractical that it posed an obstacle to families' bicycle use. Most families stored their bicycles in their houses or in the garden or garden shed, which meant that getting them out was often perceived as a hassle. Tina's family's (H6) bikes were stored in the basement of their house and some in the garden shed, both of which were difficult to carry the bikes out of and into the street from. She mentioned that she would start storing her bike in the hallway of their house on weekdays from the summer onwards, to make it easier for her to go out on her bike. However, this never happened in the end, as she admitted during her second interview. Her intention to cycle more had by then faded, too. Adam and Anita (H10) however mentioned the ease of going out on their cycles as a family since their local authority had installed cycle hangars in their road, in one of which they had hired parking spaces.

Ultimately, cycling was for most families characterised by many limitations and hardly practiced for everyday journeys. Even Bianca and Bill (H13) who were determined not to use a car at all, had to regularly fall back on the option to use their neighbour's car as part of a rare informal car sharing arrangement based on good will, whenever the weather was too bad, distances too long, or when they had to transport heavy or large things. In addition to this, they also relied on occasional lifts given to their children (to school, playdates or parties) and to themselves (to work) by other parents and friends, in order to make their cycling lifestyle work.

**Car use limitations**

As discussed previously, car use came with its own difficulties, such as rush hour congestion for which many used setting out (too) early and rat running as coping strategies. In addition to this, family members who drove often had to deal with parking limitations. Vanessa (H5), who usually had a parking space at home, in the form of her own drive, reported that during the period of house renovation when the drive was fully occupied by a skip, she avoided driving altogether, to not lose the current parking space in her street.

Most parents interviewed were cost conscious and tried to avoid parking fees at everyday destinations. Some parents coped by parking in supermarket car parks, when using other amenities with lack of parking, such as schools or libraries, or even by changing parking locations around within a day. Also, as mentioned previously, some parents set out very early, partly to secure one of a limited number of parking spaces at work. However, parking fees did not necessarily deter people from driving. Adam (H10) aimed to take the train when visiting the Westfield shopping centre in Stratford, as it was just two stops away and was directly accessible from the station. However, he admitted that half of the time he took the car, as it was convenient to travel door to door, despite having to pay for parking. Emma (H9), however, who was interested in exercise, when asked about the strict parking restrictions around one of the schools which the local authority had planned to implement, said that she would rather cycle to school, or take the bus and run back home, than having to pay for parking or having to park her car at a distance to school. (The parking restrictions turned out less strict than anticipated, and were therefore unlikely to lead to a decrease in the number of parents driving to the school).

Although the car was used by most families as the most practical mode of transport, yet another of its weaknesses mentioned was its unreliability due to regular break downs and repair needs, in addition to being expensive to buy and run.

### 6.5.3 Coping by making sense of travel behaviour through the use of narratives

When practical obstacles couldn't be overcome, where several options of how to manage everyday travel existed, or when their actual behaviour could be questioned, parents often used narratives about their travel behaviour or life generally. Narratives

served to make sense of behaviour. They were used by interviewees to justify behaviour to others (including to the interviewer during the interview), and potentially themselves, too. In fact, any practical action to cope with everyday life and travel was found to also be related to narratives. Some narratives were widely accepted, to the extent that they could be considered an expression of a social norm, while other narratives went counter to more established ones. The use of narratives can be considered another type of coping mechanism related to everyday travel. Firstly, narratives operate within and are influenced by local culture.

**Car culture and associated narratives**

Families' everyday life co-ordination took place within their cultural context. For the interviewed families, part of this was a strong car culture. Evidence was found of families not only choosing to drive due to it being the most practical mode of transport for their purposes, but also because the local culture contributed to it being the most practical, as well as the most socially accepted mode of transport. Every family apart from one owned a car and used it as their main mode of transport. One reason for this car culture was the socially accepted norm that all families own a car, perpetuated by the majority of families owning a car. Furthermore, the social norm also justified families owning two cars, to the extent that two interviewees referred to themselves as being environmentally friendly, as they 'only' owned one car.

> Researcher: *"So you have one car…"*
>
> Emma (H9): *"We have one car,* (…) - *we don't need more than one car – but we kind of try and make that a lifestyle choice that we only do stick to one car if we can…, just because, we don't really want to be running two cars from the expense standpoint, or from a green standpoint really. Who knows if that will change when they're older and we have to be in two different places at once, but for now we try to stick to one."*

Among local families, the car was seen as a status symbol, especially the more expensive German make family cars, which were considered practical, comfortable and reliable. Despite some interviewees' environmental awareness, environmental credentials of cars were rarely mentioned. When confronted with a comment that other families preferred these types of cars, interviewees who did not own such a car

themselves, replied that they disapproved of superficial status symbol seeking. However, they often seemed slightly envious of other families being able to afford such a car, or felt the need to defend themselves about why they didn't own such a car themselves. This is evidence that owning a car, and furthermore the 'right' car, was a strong social norm in the study area.

> Carl (H15): "[The family's car] *is now ten years old and if we had to replace it – at the moment it's not causing any problems, but if we had to replace it – it would be a concern, ehm... our neighbours across the road they've just bought a nice Audi A6! Another family, Audi A6…all estates, because they've all got kids – people across the road: BMW estate…I don't know, 3 or 5 series – and we've got a Ford Compromise, yes, a Ford Focus estate. I wouldn't feel that we would need to upgrade to the same kind of cars as our neighbours, a) because we can't afford it, but actually I don't feel the need to… I don't feel emotionally attached to the car as a…sex object, you know, a lot of people seem to feel: "Ha, hey my car: wow!" - I don't feel that way at all – it's functional and that's all. It just does its job, that's all I care about*."

Another status symbol found in the study area was the ownership of a drive in front of the house. Several families mentioned the convenience of their drives, with many of them having converted the original front garden of their house into a drive. One parent proudly told of their drive allowing them to park a second car in front of their drive.

Bianca (H13) often felt guilty for not owning a car, as she could only take her children's friends (who - due to Bianca and Bill's choice of school at a distance - mostly didn't live nearby) home for playdates on the bus, and had to ask parents to pick their children up themselves. Similarly, Bianca often relied on getting lifts, e.g. to birthday parties of her children's friends. She said that she often felt a "*slight anxiety*" about not having a car, and worried that her children's friends would have preferred to go by car.

Carl (H15) on the one hand said that his family was consciously avoiding any unnecessary car journeys for environmental reasons, and that he was irritated by families who wouldn't do the same but drove everywhere. On the other hand he said that people not driving at all were even worse.

> *"And then to be reliant* [for lifts] *on other friends more…, you know, one of our friends doesn't drive, so he relies on his wife driving which I think is just so selfish, so actually, it's even worse if you haven't got a car* [laughs]*."* (Carl, H15)

The social norm for families to own a car can also justify behaviours which would potentially be illegal or at least morally questionable. One mother for example, emphasised repeatedly that she 'preferred' taking the car, as an expression of her feeling that it was her right to take the car and that her driving should be facilitated (including by policy). She therefore also seemed to think that it was her right to make driving work for herself by using back routes to beat rush hour traffic on her way to work. Parking on supermarket car parks in order to pick up children from school by car (where parking at the school was lacking) was practiced by other parents who felt doing so was legitimate.

Culture was found to be locally specific. Bill (H13), whose family didn't own a car, had experienced that this also applied to the transport cultures in the areas that he had lived in. The nature of these areas had differed, with one being urban in comparison to the suburban area he moved to and lived in at the time of the interview.

> Bill (H13): "[sighs] *It's a real car culture here; that is one thing I noticed. You know, everyone drives cars and everyone drives cars all over the place for short journeys, long journeys… that is a real difference to Finsbury Park* [an inner London neighbourhood]*. And I don't think there is the same sympathy towards the needs of cyclists as a result."* (…)
>
> Researcher: *"So when you speak to people in the community, or other parents, is there an interest in more cycling or walking, less car use?"*
>
> Bill: *"Hmm, I think, well there are, yeah, there are a few others that…, I think our example has probably encouraged some people to do more cycling. There is a concern, I think, about safety. That's the paramount one with children. And I think the secondary one is about convenience. And I think those two together make it hard to get over the inertia. But, yeah, we have found in general that* (…) *there's less interest in environmental things in Wanstead than there is in*

*Finsbury Park or Hackney. Leytonstone has quite a strong…, yeah it seems the more urban you get, there's a little bit more interest in sustainability."*

An established culture is affirmed by continued practice of related behaviours by its members. Several parents in the study area were in principle interested in using alternative transport modes more, and some who used the car as little as possible, however, they also all contributed to strengthening the local car culture with their continued practice of driving. Sandra (H18) lamented the lack of infrastructure and council support for cycling and expressed her anger about parents who drove irresponsibly on the school run, making the area around her school a dangerous place to walk and cycle during school drop off and pick up hours. However, she admitted that she herself also contributed to the dominance of the local car culture by driving her children to after-school activities in her large four-wheel drive car.

Partly due to the predominance of a strong car culture, the study area didn't have a significant cycling culture. In the study area, the few cyclists in families could be anyone, however, any slightly stronger communities or identities of cycling were found only among parents (in practice mainly fathers) cycling to work in the City (mostly as a sporty activity), as well as among parents (again mainly fathers) cycling for exercise at the weekends, often in relation to hobbies such as triathlons. Direct expressions of identity related to travel behaviour were generally rare in the interview accounts. Exceptions were Vanessa (H5) who walked whenever she could and said that she had 'always been a walker', and Gail stating about her family: *"We are not cyclists".*

What is evident from the narratives around owning a car is that these often exaggerated its necessity, i.e. while people stated many reasons for needing a car, they often also admitted that in practice they hadn't shared many lifts, hadn't gone in the car together with their children as well as the grandparents, hadn't visited relatives that often, had hardly ever gone camping and had never considered buying a second car. In some cases such needs had existed, however, families' diverging space-time constellations often rendered the associated behaviour obsolete, e.g. where families had been interested in giving other children lifts, however never practiced it due to the incompatibility of different families' timetables.

Social norms and associated narratives were used by people to justify car use despite numerous disadvantages associated with it, such as cost, delays through congestion, contribution to congestion and general unsafety of roads for other users, lack of parking, as well as negative environmental impacts. Furthermore narratives could justify behaviour for which the cause was uncertainty. For example, in order to navigate around the lack of knowledge of what to expect in terms of children's development and family circumstances, families planned and budgeted for continuous car ownership for most of their children's upbringing, justified by the norm of families needing to own a car. Parents also vaguely pointed to potential future needs for having to drive older children to after-school activities, friends and potentially to secondary school, depending on its location, the distance to which parents seemed to be very tolerant of, if their child would get a place at a good school. A more concrete, practical narrative that was often mentioned was that children generally are too tired after school to cycle, walk or take public transport and therefore needed to be driven.

Narratives which presented car use as more favourable in comparison with other modes of transport were also found. These included claims that car use was less expensive as well as faster than public transport. Again, such narratives, due to a lack of accurate information, often reflected mere 'motility', i.e. the theoretical potential of mobility, and frequently over- and under-estimated costs and travel times of different modes. Debra (H8) for example claimed that taking public transport to work and back (within two outer London fare zones) was more expensive than driving. She also overestimated the time it would take to take public transport. Janet (H3), although not averse to taking public transport, and having previously had a long history of not owning a car, said she avoided taking public transport now that she had a car, as the fares were more expensive than petrol.

Although factually incorrect, these narratives still served the purpose of helping to make a decision between what was often seen as competing modes of transport. This was due to interviewees not knowing the exact costs of the travel modes in the first place, and also partly because car use involves a large upfront investment in the vehicle, car tax and insurance, which contributes to people perceiving public transport fares as additional cost and exceeding their budget. Adding to the narrative

that public transport always takes longer, interviewees also emphasised that services were unreliable or were often cancelled while ignoring the fact (which they sometimes mentioned during the same interview but in a different context) that also cars are often unreliable and prone to being held up in traffic.

Not all interviewees fully subscribed to the positive narratives about car use. Helen (H11) liked walking (she used to walk especially much when she lived closer to work and before she had children) and didn't mind public transport (although disliked buses) but needed to drive in order to manage her busy days.

> Researcher: *"So you like walking. Do you still walk regularly?*
>
> Helen (H11): *"Yes, I do still walk regularly, for example around* [the area her two jobs are located in]*. Most of the time I leave my car next to my daughter's nursery and that's me, you know, walking. If I could, I would use it less, just for the sheer idiots that are out on the road* [laughs]*. As long as I didn't have to take the bus* [laughs]*."*
>
> Researcher: *"But at the moment you can't use the car less, because of your children and timings, and so on?"*
>
> Helen: *"Yes, that's the thing. So, for me, I use it a lot with transporting them around, shopping, transporting the stuff for the market stall, and that's a lot. So it's not actually a lifestyle choice to say right I'm driving my car and I'm not going to take anything else, it's more of a necessity than anything else, otherwise I would never be able to – I've got quite a hectic lifestyle* [laughs]*. All over the place, I wouldn't be able to fit everything in if I didn't have that to use."*

Although owning a car was the predominant social norm in the study area, some interviewees also saw downsides of the choice of driving as the main mode of transport. Janet for example had felt this ambiguity since she learnt how to drive just shortly before the interview.

> *"The thing about me is that before I had a car it didn't stop me from getting to where I was going. I do a lot of my food shopping in East London because I buy like African and Caribbean food. So it never stops me, I never let not having a car stop me doing what I need to do. I'd still go to South London, you know, it*

*would just take longer. And visiting friends and family the same. But having a car makes it more convenient. Because now I can do a big shop and put it in the car. Because what I was doing before was doing a big shop and putting it into a taxi and paying like five, ten pounds for that.*

*But actually the strange thing is, having a car, I think, probably because of petrol prices, it's made me travel less, funnily enough. Because I wouldn't go shopping, because before I used to go to* [super store]*, to go shopping, I wouldn't do that now, it's just too far. And it's not convenient, and I can just go to* [large supermarket nearer to her home] *which is more or less the same size. So I think the only disadvantage of having a car is, it limits you because you think, ah, I don't really – well, I don't mind driving to see my mum in Nottingham, but I don't really want to go to* [super store] *to do my shopping. Whereas before I think, using public transport made me a bit more adventurous. It made me want to go and visit new places.*

*On public transport you've just got your bus and your feet. And because I don't have any kind of physical disabilities, it's not really a problem. I think having a car makes you kind of lazy. Because I used to go to Westfield, which was all the way in West London and I didn't mind. But I wouldn't drive there. I think congestion charge, driving in London, all these things, it puts me off. I don't know what the word is but I think it's made me not as adventurous anymore as I used to be, yeah. I think driving can be inconvenient, that's probably what I'm thinking of. Yeah, it can be inconvenient, driving, just as it is convenient."*
(Janet, H3)

**Narratives related to other modes of transport than the car**

One very popular narrative was that public transport in London is excellent. Nearly every family, regardless of how much they used their car, not only praised the public transport offer, but also had detailed knowledge of all the services applicable to their own location and main destinations, e.g. knowing about all the nearest bus stops, numbers of routes and routings of bus services. An example is Frances (H7), who, with her husband fully subscribed to a car-based lifestyle, but who also praised local public transport and knew all about it.

Researcher: *"So you say that even if you can walk to some extent in this area, you still would need a car?*

Frances (H7): *"We do, with our lifestyle we do, absolutely."*

Researcher: *"But what do you think about public transport?"*

Frances: *"It's good, yeah, it's really good. We're on a good bus route up to [tube station] so you could be on the tube in minutes. If you need to get on the mainline, you can get to* [town centre] *as well. Or you can walk up to* [another tube station], *my partner can do it in about fifteen minutes, it takes me twenty because my legs are just smaller, so you can walk up there and then you're on the tube network really easily.*

*I don't use the tube a lot. My experience is that it's not bad, but obviously people who commute a lot would have a worse experience just because the use it more often. But it's generally working, I can't remember the last time I went up to the tube and it wasn't working. But yeah, that's sort of few and far between, really. Transport wise here, we've got good links."*

Most families also regularly and happily used public transport if only infrequently. Again, this narrative was also, most often, based on the theoretical, best case, potential of public transport, as parents who actually used public transport on a daily basis, e.g. to work, while generally happy with how it worked, also had some amount of criticism to offer, such as services sometimes not being on time, insufficient frequency of trains in the morning or overcrowded trains and platforms at stations. Still, the positive image of public transport was far more prominent among the interviewees than any criticisms of it.

Cycling however was still generally regarded as unsafe, especially with children and on roads. This view was offered by nearly all parents, and it was again often based on theory rather than practical experience as most parents never cycled on roads, neither by themselves nor with their children. However, some of the experiences made by parents who did cycle on roads, did support this narrative. Anita (H10), Adam's wife, for example used to commute to Central London on her bike, however due to feeling unsafe and vulnerable to collisions with motorised vehicles, she stopped cycling. She was also unsure about letting her children cycle on roads. On the

other hand, a few parents cycled with their children on roads, e.g. Bill (H13) and Tina's husband (H6). Both were also keen cyclists themselves. Still they both agreed that cycling was potentially unsafe, however, doable when they were extra vigilant and due to their children's cycling skills.

Another narrative offered by parents was that their local authority was not interested in supporting alternative modes of transport to the car. They referred to a lack of cycle friendly roads or separated cycle lanes as well as safe cycle parking. Sandra (H18) had noticed on a recent cycle ride that a nearby road had been resurfaced, however that the cycle lane had been left out, still being in a rundown state including pot holes and cracks, which she perceived as evidence of her council not caring about cyclists.

Furthermore, the main factors that were found to influence travel behaviour also carried some significant narratives. These were not directly advocating for car use, however, were powerful enough to legitimate any car use, where necessary. These factors included parenting social norms to choose the best possible school and after-school activities, as well as to minimise additional childcare beyond school hours.

In summary, regardless whether narratives were unrealistic, based on inaccuracies or on legitimate needs, they powerfully supported behaviours due to relatively simplistic messages. This was found especially for narratives about car ownership and use, which is no surprise given the strong car culture in place in the study area.

### 6.6 Change towards more sustainable travel behaviour of families

As shown in the previous sections, family travel behaviour is embedded in everyday life with its daily co-ordination and use of coping mechanisms. The car was often the easiest choice for families to get around, not necessarily for a pleasant experience, but in order to practically (however only just) manage to reach all the relevant destinations within the family's space-time constellation. Furthermore, car use within the local car culture enabled families to conform to social norms. Once families used their car for most journeys, they were often less likely to use other modes of transport - which would have needed new knowledge and investment of additional resources - further cementing the local car culture. However, everyday life co-

ordination was constantly re-performed, evolving and therefore also potentially open to change, including to change towards more sustainable travel behaviour.

The following sections present the changes that happened in families' everyday lives, the impacts of these on families' travel behaviour, as well as any evidence suggesting a potential for change towards more sustainable travel behaviour.

**Changes in families' everyday life**

After two years, all families who were interviewed twice had experienced some changes concerning their everyday lives, which sometimes had had an impact on their travel behaviour. Furthermore, there were some reports of changes which had happened just before the first interview, and some which were to happen shortly after the second interview.

Firstly, some parents had a change of workplace location or of working hours and patterns. Secondly, none of the families had moved house in the period between interviews, although one family was about to move after the second interview and one family had just moved before the first interview.

Most of the changes that families experienced were however related to the growing up of their children. Some families went through the transition of suddenly having both children at the same school, from having one at primary and one at secondary school, or one at nursery and one at primary school. One family moved their younger child to the associated primary school, when their older child started at a secondary school. Other families suddenly had to organise their life around two different schools, when the oldest child had started secondary. Abilities and interests of children also changed, and with them the after-school activities' locations and numbers, with numbers often increasing. For some families, the journeys that children started doing by themselves, had increased, which could also mean slightly less driving to after-school activities, especially with children who had started secondary school. Several families had some changes in the number and destinations and length of leisure trips. For some parents, having older children had reduced the stress associated with parenthood in some ways.

**Impacts of life changes on travel behaviour**

Many of the life change of families offered potential for a change towards more sustainable travel behaviour, which was, however, rarely realised. Firstly, some elements turned out to override potential change. These included the social norm of choosing the best school, when leading to distances only reasonably manageable by car, to be there for your child, as well as a driving to avoid stress. The following two examples illustrate these.

Nicola's (H1) workplace remained in a similar location in Central London after she had changed jobs, however, she had drastically reduced her working hours. This meant that she had much more flexibility to walk, cycle or take the bus to school on her workdays and days off, than before. However, her space-time constellation, due to her original choice of a preferred school for her children at a 30 minute walk distance from home, still didn't make any other mode of transport than the car viable, especially as Nicola also, due to health reasons, strictly avoided stressful situations. Overall, and especially on her days off work Nicola now drove even more than before, partly as she had started to offer more after-school activities to her children, but also for errands and meeting friends. This was despite her strong environmental consciousness and wish to use other modes of transport.

By the second interview with Laura (H12), her older child had started secondary school and her younger one walked home from school independently in preparation for secondary school. This meant that Laura's pressure to be at school on time to pick up her younger son had ceased and the possibility for her to take public transport to work (which would have taken a bit longer) increased. However, Laura still commuted by car, as she wanted arrive as early as possible home after work to spend time with her son.

In some cases, life changes did lead to more sustainable travel behaviour on some journeys but less so on others. Adam and Anita (H10) for example, simplified their previously complicated school run arrangements (including sharing journeys among themselves and with two neighbours) when Anita also started working full-time in a non-local job. They hired a nanny to pick up their children every day from school and look after them until 6pm. This decision led to the immediate elimination of all car journeys from school, as the nanny would travel by bus only. However, this more

sustainable travel behaviour was offset by the new arrangement with a neighbour who took their children to school on four days and drove.

Bill and Bianca's family (H13) had changed from driving to Cambridge when visiting Bill's mother at her home, to taking the train and meeting his mother in town for a day out, possibly due to it having become easier to travel with the now older and more capable children. Bianca and Bill were special as they were committed to not owning a car and covering their travel needs by other modes, mainly cycling. This is one reason why the increase in Bianca's working hours to three days and at two different work places (due to her younger child having had started at her older child's school), as well as the slight increase in after-school activities for the children didn't lead to more driving for the family, although the number of lifts Bianca got from a colleague slightly increased, too.

At the time of the second interview Tina and her husband (H6) had just bought a new, bigger house in a neighbourhood nearby. As they hadn't moved yet, there wasn't any certain evidence for changes in the families' travel behaviour, however, Tina and her husband talked about how they thought their travel behaviour would change living at the new location. On the one hand, they anticipated to take the Underground much more, as they could then reach a station in one minute by foot (as opposed to 10 minutes by bus). However, they had decided not to move their younger son out of his current primary school after their move. This meant that Tina would have to drive her son to and from school every day, to some of the after-school activities in the area that he would keep, as well as to his friends in the neighbourhood, for at least another three years. Tina also anticipated sometimes giving her older son a lift all the way to his school, if it was on the way to her younger son's primary school.

Sometimes, changes in everyday life led to more sustainable travel behaviour to some extent, however, these changes did not make the family's overall travel behaviour significantly more sustainable. At the time of the second interview, Laura and Leonard's children (H12) had more after-school activities at their respective schools and more of them which they could walk to themselves, which decreased the number of car journeys of the family to some extent, however, as Laura was still driving to work four days a week, and both parents still had a significant amount of journeys to after-school activities, this decrease did not have a great overall effect. The same

applied to Leonard's take up of cycling to work. Leonard's workplace had moved to a more accessible location within Central London, which had reduced his work journey by public transport from one hour to forty-five minutes. It also was more accessible by bike, which led to Leonard cycling whenever he could. However, due to the logistics of some days when he could not cycle home, early morning telephone calls he needed to make and avoidance of cycling in bad weather, Leonard only cycled to work around two days a week and only in the summer months.

A few years before the first interview, Laura also used to leave the house very early and drive a large detour to work in order to go for a swim at a nice gym before work, as she wanted to relieve the stresses she experienced from her life with two, then young, children. By the time of the first interview, these stresses had become less, and Laura didn't drive the detour to the gym anymore. Still, the family's overall travel behaviour remained unsustainable.

Rachel (H4) moved before the first interview. Her child had been at the nearest school, when she was allocated the larger accommodation by the council which she had been waiting for the previous years. This new accommodation was very far from her child's school and Rachel decided to drive her daughter to her old school regardless. However, as driving became increasingly impractical, due to frequent congestion and resulting being late for school, she decided to move her to her now nearest school, a five minute walk from her house. Still she only did so, once she was happy with the quality of this school, and because her daughter's previous school had become worse. And although Rachel's amount of driving had reduced, it was still large.

Some parents had in fact increased their car use, which made their travel behaviour more unsustainable. Sandra's three children (H18) went to the same primary school, a ten-minute walk from their home. Sandra usually walked the children to school, however, she also often drove to pick them up, as each child took part in several after-school activities, which led to a large volume of car travel for the family. At the second interview, Sandra told of her eldest child's imminent start at a relatively local independent secondary school, which was accessible by bus. However, Sandra, conforming to what she was told by parents with children already at that school, already anticipated that she would drive her child to this school on a daily basis, as

that was apparently what most other parents with children at this school did (at least in the morning).

Debra (H8) told at the second interview of her secondment at work, which would lead to a change in work location. As this was nearly in the opposite direction to her son's school, the length of her commuting journey would increase significantly on the days when she would drive to or from school, which she shared with her husband. The impact of Debra's work location change was of course made much bigger by the family's initial decision to choose a school at large distance from their home address.

Karen (H16) had increased her work hours from three to four days, which resulted in five return commutes from three a week, as she opted to go to work every day in the week in order to work shorter days to be able to pick up her children from school herself more often.

Since their children had started primary school, both Janet (H3) and Paula (H19) had increased their journeys to after-school activities significantly. This led to even more driving than before, as both lived a long way from their children's primary school.

At the second interview Tina (H6) stated: "*I drive anywhere I go in the week*". She seemed to drive more and spend less time in her neighbourhood, possibly because her younger child was older and she didn't anymore feel the need to be close by in case she would have to pick him up from school, which she used to feel when he was younger.

In summary, with few exceptions, any travel behaviour changes were related to general changes in families' everyday life, i.e. resulted from these changes rather than from deliberate individual transport choices made by family members. On the other hand, not all everyday life changes led to travel behaviour changes. The areas of families' everyday life changes which impacted on travel behaviour mirrored the areas which generally were found to impact travel behaviour, i.e. work, school or childcare settings and after-school activities.

Some of these changes were also interrelated, e.g. parents often increased their working hours when children got older; one set of parents had started to put more focus on their work, which was one reason why the family did less after school or at

the weekends, while some parents who had reduced their working hours, had used the time to take their children to more after-school activities.

However, very few life changes resulted in more sustainable travel behaviour, even in cases where life changes opened increased opportunities for more sustainable travel behaviour. Many led to less sustainable travel behaviour, offered potential for more sustainable travel behaviour which wasn't realised, led to both more and less sustainable travel behaviour at the same time, or slightly increased the sustainability, however not significantly.

Of the few changes towards more sustainable travel behaviour, most were related to a decrease in car use, due to journeys that had been eliminated (e.g. due to a change to more after-school activities chosen taking place at school, school run done by a nanny who always took the bus, stopping driving a detour to gym before work), rather than an active replacement of car journeys with journeys on sustainable modes of transport. This is interesting to note, as knowledge of and interest in alternative modes of transport had been relatively high among nearly all parents, yet was rarely realised.

Overall, within the two years, most families' travel behaviour, which had mostly been fairly or very unsustainable, had changed little.

**How changes towards more sustainable travel behaviour could work**

Car use was found to be engrained among families and therefore acting as a barrier for change. However, there was potential for change, as driving wasn't a perfect mode of transport either, i.e. wasn't able to satisfy all needs of families. Among the interviewee sample parents rarely mentioned driving as quality time with their children, which however many parents noted about other modes of transport, especially about walking. This means that walking could have potential to meet important emotional needs as well as being physical exercise for the children and developing their traffic skills. Other interviewees had noted the feeling of independence while walking and cycling, at least related to not being likely to be caught in a traffic jam, such as often experienced when driving.

For travel behaviour to change, it must be considered that it is interrelated with other everyday behaviours. For example, preferences for and characteristics of grocery

shopping meant that many families preferred online grocery shopping with home delivery, but, as they couldn't get all the specially discounted products online, many families still regularly drove to the large supermarkets. An exception was Rachel (H4), who went for a small shop at her local parade of shops every day, however, always went by car, as it was on the way home from somewhere else that she needed to drive to. Activities were also found to compete sometimes. Vanessa's children (H5) first walked with her to school then went on a scooter, which effectively led to the children not taking up cycling. Also, any family's investment in car ownership and use takes away resources to potentially invest into other modes of transport.

The interviews also showed the continuous evolution of everyday activities, including travel, over time. For example, for some interviewees, the repeated practice of a travel mode led to this mode being increasingly used, sometimes in different forms. Janet (H3) for example had only just started driving shortly before the first interview. Then she still drove little and avoided night driving and driving longer distances, as she was still not a confident driver and hadn't taken driving for granted yet. This had changed two years later, when she drove virtually everywhere. Vanessa (H5) liked walking and walked whenever she could. She walked to and from school with her children daily. Regular walking meant that she was capable and willing to walk longer distances, e.g. she often walked for around half an hour (to school and on to an exercise class), and she accredited her children's ability and willingness to walk to the same continuous practice which she started them on when they started to walk, i.e. at a young age.

Trying out and generally 'doing' new behaviours is a key means to facilitate potential longer-term uptake. Leonard (H12), Laura's husband, started cycling to work after he had used the largest cycle rental scheme in London for some time to travel to meetings in London during his workday. The experience of cycling as working mode of transport and as enjoyable and benefitting his wellbeing led to him cycling also to work on a regular basis. Also, already using one alternative mode of transport than the car can prompt consideration to start using another alternative mode of transport. For example, Vanessa's children (H5) walked to most after-school activities in the week but she and her husband drove them to tennis and football practice at the weekend. These journeys were probably considered too far to walk (ca. 30

minutes' walk), however, could potentially be cycled, especially as the family already stated that they would like to cycle more as a family. As they already did at least some journeys without the car, the possibility of using other modes had already been considered. Improved cycling infrastructure in the area and cycle training for all the family could be helpful in this process.

As was mentioned previously, change might be more likely within a community. This can be supported by strengthening resources of communities, such as special interest groups and local access to and exchange of advice, training and equipment. Janet (H3) positively mentioned the minibus owned by her local church which was used to give lifts to members of their community. Also Bill (H13), who would like to see more car sharing options locally, proposed a local car share, for example for members of their local church community.

Pioneers can be influential, i.e. people who practice behaviours are often visible and might inspire others to change their behaviour, too. Bill and Bianca (H13) clearly deviated from the local mainstream by not owning and hardly using a car. However, a few other families also showed an interest in using the car less, sustainable modes of transport more or potentially giving up car ownership. Bianca and Bill had been the only parents who cycled to school with their young children in a trailer, after they had newly moved into the area, however, after a few weeks, several other families had bought cycle trailers, too.

Vanessa and her husband (H5) usually drove to see her parents outside of London, however, as her parents usually took the train and had also taken of their grandchildren on the train, Vanessa considered taking the train, for a longer journey, too.

> Vanessa (H5): *"No, my parents now live in* [county]*, so that's a three hour drive. So when we go and see them, then obviously we take the car. When they come to see us, they tend to come on the train to* [London station] *and then they get the tube to here which is fine. But obviously when it's me with the kids and stuff I drive over there. I have a brother who lives in* [a region in England]*, we are going to stay with them over half-term and we're getting the train. Yes, we do the train."*

Researcher: *"Ah really, for the first time?"*

Vanessa: *"Yes, with the children, yes, because the kids love the train. My mum has taken our little boy back on the train. But I've never done it, but you know what I thought I'd sit on a plane with them for thirteen hours with the children, and the train journey from* [London station] *to* [regional town in England] *is two hours. So and then they'll pick us up from the station. So I'm thinking – I can do two hours. And our little boy loves trains, so it'll be fine. And I'm quite happy - obviously we have to get from here to* [London station] *– I'm quite happy going on the tube with them. Yes, it's easy. And again they're used to it."*

These processes further link in with the power of images, as well as further performance of sustainable transport practices, influencing the building of narratives, social norms, identities and communities. Visible measures are for example physical infrastructure changes, or the presence of people already practicing an alternative travel behaviour. Leonard (H12), Laura's husband, for example got interested in cycling when he saw the new rental bicycles and parking stations for them in many locations around his workplace. He started using the scheme and later took up cycling to work on his own bike, which he enjoys, partly as he is one of the many cycle commuters he sees cycling around him.

Zoe (H17) said that had they not chosen a faith school for their children, but their local state school, they would have walked to and from school. This was probably partly due to her seeing other parents walking to school.

> *"It's just the fact that we opted for a church school which means that we've got that bit of distance to travel. But a lot of children around here go to the local school and you see them out walking to the school. When I drive my younger son to school, we drive past* [local school] *and we see lots and lots of kids walking with their parents. Actually the local before and after school club walks a crocodile of kids to the school, they have high viz like tabards, so we see them in the morning walking by. In fact at quarter to nine, the other side of the railway bridge is busy with people walking their kids to school."* (Zoe, H17)

Vanessa (H5) tried to walk as much as possible, however, drove quite a bit as well, as did her husband. They owned two cars. Still, Vanessa showed some interest in car sharing, supported by her noticing dedicated car sharing spaces in the street and talking to a friend.

> *"Yes, I would notice if we didn't have a car. I don't rely on it but it's nice to have it there. Sometimes I think, you know, it's pointless to have the car sitting outside – you know I could use one of those zip car things –* (…) *but I don't know anybody who has used one, but I've seen the car, eh, the parking spaces. I know a friend – not from round here – but a friend who lives in South London, she has used one of those for a bit, she says it's fine, but you've got to be organised, you can't just nip in the car."* (Vanessa, H5)

While community-based efforts for more sustainable travel behaviour are important, organisations as well as the state have an important role to support communities and to provide services themselves. Emma (H9) for example, describes what single thing would improve her everyday life and travel:

> *"Oh, a school bus! An organised bus like they have in the States, a big yellow bus that takes the children to school, picks them up and drop them back home* [laughs]*. Something you can trust. Certainly the school bus is something parents trust in the States, it's something the most kids will do, go to school on a bus. It's a private company, but it's very much a trusted mode of transport.*
>
> *Whereas we don't have anything similar in this country, we don't have a trusted school bus. Some schools do, but they invariably are the private schools. So I would think it would be nice if we could have some kind of bus system for the state schools that could be relied upon and could be trusted. Yeah, that would be nice. That would save me go up and down, up and down, up and down."* (Emma, H9)

Due to the ever evolving nature of everyday life activities, there is always at least a theoretical potential for behaviours to change. While the evidence from the interviews shows that car use is deeply engrained, and while hardly any significant changes towards more sustainable travel behaviour had taken place, the interviews gave some indication of how change could happen. When trying to understand

potential change - similarly to understanding how everyday travel behaviour works - travel behaviour has to be seen as part of wider everyday lives of families.

**Conclusion**

Family travel behaviour was found to be firmly embedded in, and affected by, their everyday lives. Characteristics of travelling with children were outlined, and the impacts of relationality. Also, the everyday co-ordination of activities was found to be extensive due modern, fragmented and individualised lives leading to equally extensive travel demand.

Some of the identified factors influencing travel behaviour (see Chapter 5, Interview findings – Factors influencing travel behaviour), i.e. social norms were closely related to family needs, often around parenting, which were found to be main drivers for families' everyday lives in general. Everyday life is fluid and full of friction, which families navigate on a daily basis. Families' coping strategies related to some of the obstacles, frictions and ambiguities of everyday travel were identified. These obstacles and the coping strategies used to overcome them were related to both practical/material and emotional/social spheres.

Overall, the analysis of the interviews with parents resulted in a rich picture of everyday travel behaviour and how it comes about. It went beyond a narrow perspective on factors influencing travel behaviour and showed travel behaviour as part of complex and messy everyday life, as an experience and expressed through the subjective accounts of interviewees. This perspective also enabled a look at changes in families' everyday lives, as well as a tentative identification of the necessary changes for family travel behaviour to become more environmentally sustainable.

The following chapter examines the findings of this study in the context of the existing relevant research on family travel behaviour.

# 7 Discussion of findings

In this chapter the findings of the study are discussed in the light of previous research on family travel behaviour. The results of the interviews conform to many of the issues that were already pointed out in previous research. However, this study, due to its specific approach and focus, also contributes some new insights and perspectives on family travel behaviour, as studied in the case of the neighbourhoods of Aldersbrook, Snaresbrook, Wanstead and South Woodford in the London Borough of Redbridge. The study applied an everyday life perspective, looking at family everyday life and how travel behaviour is interwoven.

The following findings of the study are discussed in the light of previous research: the factors found to influence family travel behaviour, as well as the relationship of travel behaviour and everyday life, including relationality, and the characteristics of family everyday life co-ordination, including the use of coping strategies to satisfy family needs.

The findings are also discussed in the context of practice theory, which was identified in the literature review as a potentially useful lens for this study. This is followed by the presentation of the updated conceptual framework. Finally, the potential for change of family travel behaviour is discussed.

## 7.1 Factors influencing family travel behaviour

This study used an everyday life perspective, i.e. family households' everyday life was examined in order to better understand how travel behaviour comes about. As a result, a number of factors influencing travel behaviour could be identified, as well as how these are interrelated. Factors might broadly be assigned to categories such as 'individual', 'social' and 'contextual' factors, such as or similar to the categories often used in previous research, however, this categorisation was not found useful for the understanding of travel behaviour as attempted through the methodology of this study.

In accordance with, for example, Cockerham (2005), who refers to Weber's definition of agency as the free will to choose, and to structuration theory, which sees free will as always executed in a social environment, family members' individual motivations

for travel behaviour were found to be interrelated with the social environment (e.g. culture and social norms). Behaviour always happened in some relation or as a response to the social environment, even when it differed from the prevailing social norms. This suggests that agency can be viewed as the result of both internal attitudes and external social influences, which are part of the structures within which people lead their lives. It also means that attitudes alone cannot be assumed to lead to specific travel behaviour (Shove, 2010:1278), for which this study provided evidence.

What distinguishes this study from some previous studies of travel behaviour is that it revealed influencing factors in the specific contexts of families' everyday lives, as well as interrelating with each other. It presented a bigger picture of family travel behaviour, including the effects and broad hierarchy of such different types of factors as space-time constellations, car-limiting policy and experiences made in practice, for example. Rather than separating out 'individual', 'social' or 'contextual' factors, it made more sense to point out the significance of families' space-time constellations and how these influenced travel behaviour, alongside other main factors directly influencing the use of certain travel modes, as well as secondary, contributing factors.

Overall, the difficulties when trying to isolate single significant factors indicate that factors are interdependent and work together. The analysis showed how complex and dynamic families' travel behaviour was, and that each family case can be regarded as its own amalgam of similar or common everyday life aspects, i.e. what Jarvis, Pratt and Cheng-Chong Wu termed "*this whole complex web within which travel and mobility is located*" (Jarvis, Pratt and Cheng-Chong Wu, 2001:10).

### 7.2 Space-time constellations

Space-time constellations were found to be the main factor influencing family travel behaviour and leading to families mainly using the car for everyday travel. They are a family's unique constellation of home and destination locations, timings of activities and frequencies of journeys. Space-time constellations were shown to result not only from space and time parameters such as possible locations and timings (such as highlighted by Hägerstrand (1970) and Lenntorp (1976)). Also other factors impact on a family's space-time constellations, such as social norms and cultures, e.g.

influencing choices of activities and their locations. These are related not only to transport but to wider spheres of everyday life, e.g. parenting and working. Not least, families with children face particular challenges in their daily travel behaviour, due to children's relative dependence and ever changing cognitive and physical ability. These include aspects from how to practically transport children, to dealing with the general pressures of parenting on mental health. To better understand family travel behaviour, all these factors and spheres of everyday life need to be considered together.

As the physical accessibility of amenities from family homes in the study area was generally high, space-time constellations were in large part due to families' school choice (Carver, Timperio and Crawford, 2013:75; Hilllman, 2006; Fyhri et al., 2011). Most families didn't choose their nearest school as it wouldn't have satisfied their requirements for quality of education as much as their first choice of school. This result is to some extent evidence against the argument of Butler and Hamnett (2011:160-163), that most families move close to their desired school, in order to secure a place for their children, if they have the financial means to do so. Popular schools usually lead to disproportionally high property prices and rents in their vicinity, which is an often-criticised side effect of admissions policies of schools based on distance criteria. Most of the studied families however did not move into the catchment area of specific schools, for a multitude of reasons. This phenomenon was also found by Jarvis and Alvanides (2008:390) in their study of family resources and school choice. As they put it: "Instead, housing and neighbourhood choice combine or collide with other household preferences (often leading to compromise or sacrifice by one or more household members) in an iterative process of biography building (Jarvis, 1999)." The findings of this study reaffirm this.

Another main factor influencing space-time constellations was the amount of organised after-school activities which most children attend, at different times and places (Dowling, 2000). After-school activities are in fact often the main activities that children take part in, in their leisure time. They are part of today's much organised childhood, unlike some decades ago, when children generally spent more time playing freely either at home, outdoors or at friends' houses (Hjorthol and Fyhri, 2009:217). This study strongly supports this claim (see Section 5.2.2 (Underlying

factors of space-time constellations: Choice of after-school activities) in Chapter 5 (Interview findings – Factors influencing travel behaviour).

Furthermore, the mismatch of work and school hours also greatly influenced travel behaviour, leading to car use due to time pressure. Wrap around childcare which could alleviate time pressures, was available in the study area, however, confirming recent research (Davis, Hirsch, and Padley, 2016; Department of Education, 2015), was perceived by many as expensive, and was often barely affordable for families on lower incomes. Many parents stated that they rushed from work, also in order to avoid additional childcare costs.

However, the main reason for not using wrap around care (which was available in the study area) was that generally, long days for children at school were seen as unfavourable by parents. This was either because of a perceived lack of quality of after-school clubs or childcare, or, in most cases, because parents didn't want their children to spend extended days in childcare, but rather spend time with them themselves, or have more personal childcare in the form of relatives, friends or a nanny. Jarvis and Alvanides (2008:398) similarly found that all the parents they had studied, notwithstanding their different social backgrounds, valued the opportunity for 'being there' for their child, e.g. at the school gate. This was evidence of a "powerful moral understanding of engaged parenting", e.g. as mentioned by most parents in the study, the ideal was to work within school hours (Jarvis and Alvanides, 2008:399). Overall, this study did not only confirm that parents' working hours are usually longer than children's school hours, but that nonetheless, this factor could contribute to parents driving more.

Conceptualising the research findings using a focus on space-time constellations, and working together with a range of different types of other factors, this study was able to confirm that individual factors such as attitudes and rationalisations usually do not lead by themselves to travel behaviour, such as suggested through utility theories, and the Theory of Planned Behaviour (Ajzen, 1991). Firstly, as mentioned previously, individual factors are always linked to social factors, such as social norms. Secondly, this study found that individual attitudes are often overridden by other factors, e.g. contextual ones (e.g. transport accessibility, or working hours). Thirdly, as travel behaviour is embedded in everyday life, any individual factors influencing travel

behaviour might not be directly related to transport but originate from other everyday life spheres such as parenting. Fourth, no person acts independently from other people, i.e. relationality impacts on an individual's behaviour. Ultimately, individual factors work together with many other factors, and often as part of the space-time constellations of families. This study therefore also found evidence for the existence of a value-action gap (Blake, 1999) in many cases, e.g. where people intend to cycle more, but then never do so.

The findings of the study also reject the idea that travel behaviour is primarily due to physical parameters, e.g. accessibility, density of spaces, etc. (such as focussed on by Ewing and Cervero, 2010; Næss, 2006; Handy, 2005; Newman and Kenworthy, 1989). Physical attributes were found to be important influencing factors, which in areas with low accessibility might even determine travel behaviour from the outset. However, where there are a number of different transport modes that can realistically be used, such as in the study area, it is more useful to look at space-time constellations, which bring together physical context, and the individual and social factors (e.g. attitudes and social norms not only related to transport, but to wider spheres of everyday life) that underlie choices of destinations travelled to, and as set in families' wider everyday contexts. Crucially, focus on space-time constellations also goes beyond time-geography as presented by Hägerstrand (1970) and Lenntorp (1976) (i.e. the possibility of travel within space and time limitations), in that it also includes underlying individual and social influences.

### 7.3 Social norms and local cultures

As was shown in the last section, families' space-time constellations were significantly influenced by social norms related to bringing up children, e.g. choosing the right schools and after-school activities, as well as 'being there' for children. Another influential social norm was the wish to keep children safe (Lang, Collins and Kearns, 2011). Cycling was commonly considered unsafe by parents. However, diverging from studies which found influential social norms around keeping children safe by driving them, such as those by Murtagh, Gatersleben and Uzzell (2012), Waitt and Harada (2012), Barker (2011), Murray (2008) and Bean, Kearns and Collins (2008), none of the interviewees in this study actively mentioned driving as an especially safe mode of transport. This points to the car as not being perceived positively in the study area,

which was the case in other study locales. The need to keep children physically active was another concern for parents, and corroborates the work of previous work in this area such as Lang, Collins and Kearns (2011). Furthermore, parents showed an interest in outdoor activities for their children, and for children to be able to travel safely and independently as a life skill.

Social norms and cultures are locally distinct; i.e. might differ among otherwise similar places (e.g. rural or suburban ones) (Barker, 2011). In the study, some interviewees' experiences, although in this case comparing different types of areas (i.e. urban and suburban), confirmed that cultures including transport cultures differed. For example, residents of urban areas were gauged by interviewees to be more community-minded and more interested in sustainable travel behaviours than those living in suburban areas.

### 7.4 Material and emotional experience of travel

Using an everyday life perspective, as done for this study, the 'doing' or process of everyday life of people, including people's experiences, is considered. Experiences during everyday travel were not found to be deciding factors for the outcomes of travel behaviour, however, were often an important contributing factor. For a fuller understanding of family travel behaviour, experiences of travel need to be considered.

Material and emotional experiences of travel are two sides of the same coin. Every experience related to the use of materials, such as equipment, or travel through the physical environment coincided with emotional responses. People moved their bodies, used vehicles and infrastructure as well as traversed environments when they travelled. They also experienced feelings while they travelled (Sheller, 2014). While experiences do not necessarily lead to particular travel behaviours, they are a continuous accompaniment to travel behaviour and can be powerful in contributing to present and future travel behaviour choices.

### 7.5 Everyday life and travel

The following sections discuss some of the findings that resulted from the use of an everyday life perspective, i.e. looking at family households' unique and complex everyday lives, including their everyday life co-ordination, as played out in each family's specific context. These findings about family travel behaviour show how travel behaviour is inextricably part of everyday life, enabling it and also being enabled by it.

#### Relationality

This study highlighted the impact of relationality on family travel behaviour. Although the focus of the study was on the families' main households, travel behaviour of individuals was found to also be highly influenced by, and therefore contingent on, other people, such as neighbours, relatives or childminders. It is therefore worth considering for future studies to employ a wider definition of family for the future study of everyday travel behaviour, defining family less through any inherited status but more through the significance of everyday exchanges and practices, such as advocated by Smart (2007) and Morgan (2011).

Jarvis, Pratt and Cheng-Chong Wu (2001:15-16) found that the mismatch of work and school hours put pressures on parents' everyday life co-ordination, which they had to resolve by compromising. This study confirms this finding and also showed these negotiations' impacts on family travel behaviour. Changes in the life of one family member also led to changes for other family members (Jarvis, Pratt and Cheng-Chong Wu, 2001:15-16, 57; Barker, 2011:416), e.g. parents had often increased their working hours when children had grown older; one set of parents had started to put more focus on their work, which was one reason why the family did less after school or at the weekends and spent more time at home, while some parents who had reduced their working hours, had used the time to take their children to more after-school activities.

Relationality was not only found to impact on travel behaviour directly, but also indirectly. As the choice of school and after-school activities was among the main factors influencing how families travelled, it is necessary to extend the consideration of relationality's impact to how families choose these destinations in the first place,

and to other, wider everyday life issues such as working arrangements of parents. However, due to the limited scope of this study, the focus was on direct relationality effects on travel behaviour and therefore such wider effects were only considered where evident.

**Fragmentation and individualisation of family everyday lives**

Another key finding from this study, which looked at travel behaviour as part of family everyday life, was that families, despite having to operate at least to some extent within child-related daily time and destination restrictions, led very much individualised (compared to other households) and fragmented (in terms of the amount of activities and individual choices of their locations) lives. This reflected previous research which has claimed that everyday life is exposed to increasing space-time compression (Pratt, 1996), harriedness (Southerton, 2003) and underlying fragmentation and individualisation of people's lives generally, which all contribute to car use as the main mode of transport. Fragmentation often increased when families had complicated everyday life co-ordination models, involving a number of people. Southerton (2003) found that people feel time-squeezed due to the challenge of co-ordinating daily life around their own time frames and that other people, which may vary widely due to different lifestyles. Most families in this study also had more than one child, which again significantly increased fragmentation as found by Hamilton et al. (2005; in Jain, Line and Lyons, 2011:2) in their study on gender equality in transport. This fragmentation is therefore enhanced by relationality (see previous section).

**Family needs**

One main driver of family everyday life was conceptualised as meeting family needs. Most of these needs that families aim to satisfy on a daily basis, were social and emotional ones, often also related to social norms, and included being there for others, safeguarding and supporting children, working and keeping healthy, and the related practical needs of travelling to relevant destinations. Wind (2014:69-74, 164) refereed to practical, social and emotional family needs. In his study he discussed how these can be satisfied by everyday travel.

In this study, however, the family needs which were most influential for travel behaviour were not necessarily those that were directly met by travel. They were the general life practical, emotional and social needs of families and especially (as a priority over other needs such as physical exercise or environment concerns) the fulfilment of parenting norms. These were satisfied firstly by the choice of destinations such as schools and after-school activities, which then influenced families' space-time constellations and ultimately travel behaviour. Needs that were directly fulfilled through travel (such as outlined by Wind (2014)), were still relevant, such as the need for physical activity which could be directly met by active everyday travel, as well as some emotional needs fulfilled directly through the experience of travelling. And as introduced previously, the material experiences of travel were also likely to have had an impact on what needs families prioritised in the first place. These findings once again are evidence for the tight interrelationships between travel behaviour and general everyday life.

Family needs configured space-time constellations in a way which led to families mainly driving in their everyday lives. This means that families only used other modes than the car where these didn't interfere with meeting their primary needs. Car use can therefore be situated in the context of family needs which include life priorities and ambitions. The car can be considered as the best means to meet diverse family needs due to the amount of activities and length of distances to cover. Once the car was adopted as the main mode of transport for families, other modes of transport were less likely to be adopted. This idea is also reflected on a larger scale in Urry's analysis of the 'automotive system' (Urry, 2004).

**Coping strategies**

The use of an everyday life perspective for this study also highlighted the frictions of everyday life and people's responses to them. Regardless of which transport modes families used, they had to navigate obstacles to managing space-time limitations, as well as any obstacles emerging through the material and emotional experiences of everyday travel and modes of transport used. They did this by using coping strategies.

Families' space-time constellations often led to time pressure which was partly responsible for widespread car use. Some families were found to schedule activities, such as children's after-school activities, in clusters, e.g. they went to several in one

day, in order to have more 'free' time at another time. This was also observed by Southerton who found that people often rush around during specific periods, which he called 'hot spots' in the day in order to have more unpressurised time in other periods ('cold spots') (Southerton, 2003).

Despite alleviating some of the space-time limitations by organising their activities efficiently, most parents were still under time-pressure and many therefore (among other reasons) chose to drive. However, using the car rarely eliminated family time pressures entirely, and often only 'worked' when setting out at inconvenient, too early times and using complicated detours or short cuts.

Solutions which seemed to work best for families to co-ordinate travel to work and school, for example, and which haven't been emphasised in any previous research, were on the one hand very flexible working hours, i.e. working hours that were clearly defined as within school hours and commuting times, as well as very good quality, seamless before and after school childcare, e.g. in form of a nanny. Both options reduced the time pressure and complexity of daily changing arrangements and seemed to satisfy to a large degree the expectations of parents for good parenting. While less time-pressure didn't mean that families would necessarily use their car less, it sometimes did, and can therefore be seen as a favourable condition increasing the potential for use of sustainable modes of transport.

One of this study's main findings was that, in the context of family pursuit to satisfy needs, none of any kind of family coping strategies, including driving, worked perfectly, which points to a need for wide ranging and significant change in the conditions and context of everyday travel, in order for the latter to work better, and also for it to potentially become more sustainable.

Another key result from the study, due to its use of a narrative inquiry, interview-based methodology, was that families also used narratives as coping strategies for travel related issues. Social norms and associated narratives are helpful coping strategies for people to justify their car use, despite numerous disadvantages of the latter such as cost, contribution to congestion, general unsafety of roads for other users, as well as environmental damage and climate change. Narratives can also justify behaviour for which the cause is uncertainty, e.g. the norm of families owning a car justified family planning for continuous car ownership, to navigate around the

lack of knowledge of future transport needs due to children's development. Parents pointed to potentially having to drive older children to after-school activities, friends and possibly to secondary school. Narratives can be especially helpful with modern, fragmented and individualised lifestyles where people are expected to make the 'right' choices in circumstances of uncertainty (Giddens, 1991; Guell et al., 2012).

Freudendal-Pedersen's (2009) study of families in Copenhagen also demonstrated how families created 'structural stories', or narratives, around mobility, which were considered to be universally true in this particular social environment. By definition, the use of such structural stories was widespread, which also further cemented any other social norms supporting car use and the dominance of car culture in general. Such structural stories were often presented by interviewees to justify the use of the car where there might have otherwise been some moral ambivalence.

In accordance with the most influential social norms, the strongest narratives were related to bringing up children (corresponding with findings from Miller (2005) and Freudendal-Pedersen (2009:45)), and often justified car use. Some counter narratives that criticised car use did exist, however, with the typical space-time constellations of families, and a lack of transport alternatives with similarly strong narratives around them, driving remained the main mode of transport.

Narratives mostly reflected the local car culture and were often over-generalising, exaggerated, inaccurate or contradictory. This was found by Freudendal-Pedersen in her structural stories, which also often claimed some theoretical potential or best-case scenario of travel - what Freudendal-Pedersen calls 'motility' (Freudendal-Pedersen, 2009:90). It is also evident from this study's interviewees' narratives around owning a car, that these frequently exaggerated needs, i.e. while people stated many reasons for needing a car, they also admitted that in practice these reasons had not been that relevant.

**Practice theory to underpin an everyday life research perspective**

As part of the literature review, practice theory and empirical studies applying it were presented as potentially interesting perspectives on travel behaviour. Practice theory promotes a holistic perspective on human behaviour, and although as a whole, did not prove to be applicable to this study due to its more general focus (rather than a

micro-focus on households, as discussed later is this section), elements of it are useful for the interpretation of the results of this study.

Firstly, as opposed to a view of travel behaviour as an outcome of individual choice only (Shove, 2010:1278), practice theory takes a holistic, everyday life view of the different factors influencing travel behaviour and conceptualises them as interrelated elements of a larger system (Shove, 2010). This study applied a similarly holistic perspective, looking open-mindedly at interview data for any emerging factors that influenced family travel behaviour. These were found to be a diverse mix of physical and social factors, overlapping with the material, symbolic and affective categories of elements as outlined by Reckwitz (2002:249-250), as well as interrelating, e.g. the space-time constellations of families with social norms about bringing up children (e.g. educational aspirations, health, and care), and material and emotional experiences (see Section 5.4.2 (Everyday travel as material and emotional experience) in Chapter 5 (Interview findings – Factors influencing travel behaviour)).

Practices can be conceptualised as a duality of structure, within which individual will is one element influencing behaviour, however which is influenced by behaviour and the structures that behaviours build, at the same time (Giddens, 1984, in Jarvis, Pratt and Cheng-Chong Wu, 2001:38-39). Practices, or generally, taken for granted behaviours in space and time and cultures, are therefore part of a whole system of different types of elements, which is also the view taken for this study. Jarvis, Pratt and Cheng-Chong Wu (2001:120-121) describe this as 'situated understanding'.

This study also found some evidence for different practices interacting or even competing with each other, i.e. similar to Butler et al. (2014) who pointed out the relationship between shopping and driving, with an increase in driving when shopping evolved from daily local shops to weekly shops in larger supermarkets. This study confirmed such relationships, and due to its focus on the individual household, was also able to add knowledge about how individuals went about such behaviours in their everyday lives, which could differ from person to person.

Practice theory also acknowledges the dynamics within a system. One expression of this is that any practice is the sum of the continuous performances and evolution of it (Schatzki, 1996, in Shove, 2010:1279; Pile and Thrift 1995, and Carlstein, 1982, in Jarvis, Pratt and Cheng-Chong Wu, 2001:39). While this study took a micro-

perspective at a household level, some of these dynamics could be identified, too, although mostly applied to individual performances (as opposed to the sum of performances by anyone which make up a practice). For example, for some respondents, the repeated practice of a travel mode led to this mode being increasingly used, sometimes in several forms, e.g. first using rental bikes, then starting to commute on own bike to work. This micro-perspective therefore added some knowledge about the 'careers of practice carriers', as demanded by Warde (2005:149).

Furthermore, individual behaviour is situated, embodied and subjective (e.g. Game, 1991, in Jarvis, Pratt and Cheng-Chong Wu, 2001:40). This includes the influence of relationality on family everyday life, i.e. the latter is mediated by the household and its members, as well as by relationships with other people (Jarvis, Pratt and Cheng-Chong Wu, 2001:15-16; 57; Barker, 2011:416). This was also found in this study, as discussed in the previous sub-section on relationality.

Related to the continuous performance of practices are the material and emotional experiences of travel, which are also part of the material and affective elements of practices (Reckwitz, 2002:249-250). Neither was found in this study to be a deciding factor for travel behaviour on its own, however, both were found to potentially influence it to some extent, e.g. they might have a supporting or obstructing effect on potential new behaviours.

The focus of practice theory on continual performance, as well as the acknowledgement of the importance of relationality, means that practices can be usefully considered as part of family everyday life (Fortuijn and Karsten, 1989; Jarvis, Pratt and Cheng-Chong Wu, 2001; Jarvis, 2003; Jarvis, 2005), which also was the basis of this study.

Practice theory also offers an alternative conceptualisation of 'habit', i.e. seeing a habit as more than only the repetitive performance of a behaviour, but as an expression of a stable system in which all relevant elements are working harmoniously, and therefore making certain behaviours more likely than others, which, with repeated performance further strengthens this system (Shove, 2010; also Weisner, 2009). This was seen in the analysis of family everyday travel, where family members seemed in the habit of car driving but where it also emerged that car use

was part, and partly a consequence, of an already established, relatively stable system, while modes such as cycling or public transport had more elements working against them. However, car use was also found to have weaknesses, which is why it cannot be considered a truly sustainable practice either, i.e. although car use often worked best for families, it often didn't actually work that well, e.g. due to daily delays from congestion, lack of parking spaces, or regular technical issues requiring repairs.

Despite several interesting aspects, practice theory had basic limitations when applied to the understanding of family travel behaviour in this study, due to its focus on practices as the unit of research. Driving, cycling, walking or public transport could potentially be considered individually, e.g. when summarising the material aspects of cycling (using different bikes and equipment), compared to those of other modes, however, the separation into practices was not fruitful for the aims of this study. Rather, travel behaviour in general, as well as other potential 'practices', such as parenting, working or shopping, were identified as very much interrelated and diverse behaviours being part of the individual set up of everyday life co-ordination of each family.

Therefore the question wasn't how different elements of the system contribute to reproduce and sustain certain *practices*, but rather how they reproduce and sustain a *system* which leads to certain travel behaviours (via long term life decisions as well as everyday life and all the elements which lead to those in the first place) which was also argued by Shove (2010). In this study, the system is looked at from the bottom-up perspective of a family household.

In practice theory, practices are defined as the sum of all performances of a practice, by anyone, and are seen as a system including different elements. While acknowledging this system, this study focussed on unravelling the unique set ups of different families' everyday travel behaviour from a micro-perspective, following Gibson et al.'s (2011) suggestion to focus on household dynamics and the idiosyncratic behaviours of household members. This resulted in rich evidence of how different families cope with their everyday life in unique ways. Therefore, while the focus on practices could be very useful in other contexts, for this study the most

useful unit of analysis was found to be the everyday life co-ordination of individual family households.

In this way, this study shared a similar perspective with Jarvis, Pratt and Cheng-Chong Wu's (2001) study, i.e. on everyday household co-ordination (which was itself inspired by practice theory), however, with a clear focus on better understanding travel behaviour specifically.

This study concludes that the travel behaviour of families has to be seen in all its forms (including all family members' journeys to all destinations and using all modes) and as embedded in families' everyday lives, i.e. related to any other behaviours of the family. Rather than focussing on practices, and how their elements influence it, the focus is on the 'system' or 'whole complex web' (Jarvis, Pratt and Cheng-Chong Wu, 2001:10) which constitutes a family's everyday life (including general social norms and longer term life ambitions and decisions) and how its elements interact and also influence the family's travel behaviour. Travel behaviour is therefore seen as embedded in everyday life, rather than being considered as a practice with its associated system.

In summary, while the results of this study support and use some of the ideas of practice theory, the main focus was the micro-level of family households, with support from the subjective ideas and experiences, as talked about by the parents interviewed. The study focussed on overall travel behaviour, rather than single 'practices' such as driving, cycling or walking, and had families' general everyday life as its starting point.

### 7.6 Updated conceptual framework

On reflection, the findings of this study go beyond the original conceptual framework devised in Figure 1, Chapter 2 (Family travel behaviour: Existing knowledge and research approaches). This has been reworked in Figure 8 below and in this section the rationale for this reworking in light of the findings is discussed.

In order to create the original conceptual framework, I started by reviewing the existing literature on families' travel behaviour. I found that there hadn't been much research yet on families specifically.

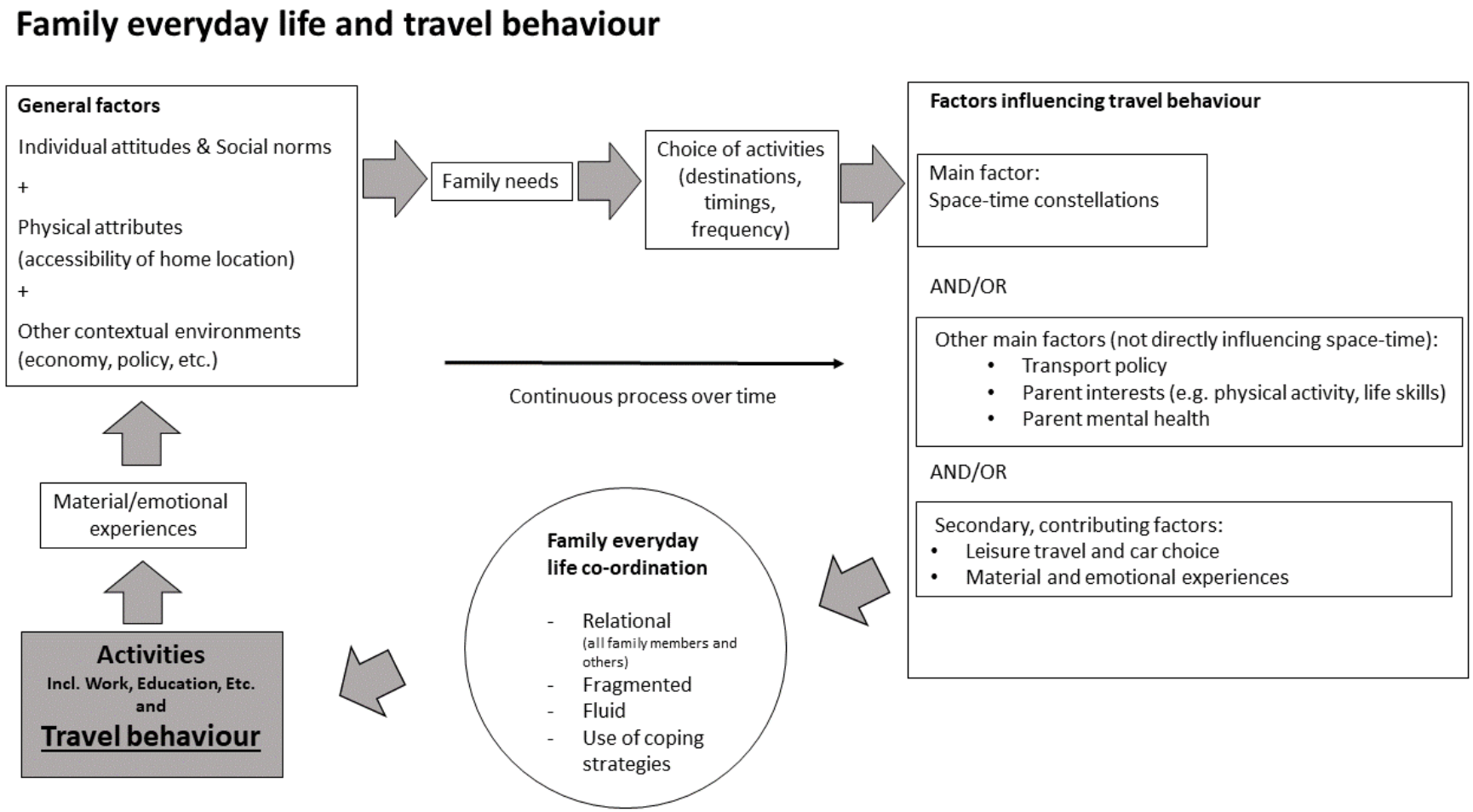



**Figure 8**

***Conceptualising family everyday life and travel behaviour (author's own) – Updated conceptual framework***

I therefore summarised some of the limited research there was on families, also including some of the non-transport but family-related research on aspects of typical family destinations such as work, school, after-school activities and childcare for example. Doing this, I could already see that everyday travel was strongly interrelated with other everyday life spheres, and that family travel behaviour was relational, i.e. influenced by each member of the family household as well as others. I also identified a number of different influencing factors from the literature, such as individual, social and contextual factors. Most studies focussed on one category or one factor only.

From the literature review it became clear to me that, in order to better understand the travel behaviour of families with children, it has be studied in its everyday life context. I applied such a perspective for the research of this study, and conceptualised some of the findings as different factors influencing family travel behaviour, which I presented according to their relative importance or hierarchy (such as main and secondary factors). This is one of two major differences between the original conceptual framework and the updated one. The original individual, social and contextual factors are still relevant, however I conceptualised them differently. The categories which I used to describe factors, often included a mix of individual, social and conceptual factors, e.g. space-time constellations are influenced by all of those factors at once.

The original categories of 'individual', 'social' and 'contextual' for factors influencing travel behaviour were also found to be too simplistic and separating. All factors related closely to each other, with factors often each having several different facets, such as practical, material or emotional. Therefore, the 'Factors influencing family travel behaviour' include individual, social and contextual factors, but these are part of new categories, and ordered into a broad hierarchy of main factors such as 'Space-time constellations', 'Other main factors' (e.g. some parenting norms, such as active, outdoor experiences for children), and 'Secondary, contributing factors' (e.g. leisure travel and car choice).

There are several elements that recur in the updated conceptual framework, however which this study was able to provide more detailed knowledge about. These include the characteristics of everyday travel with children, e.g. that children's relative cognitive and physical stages of development often make travel slower and more

complicated to the point that what would be commonly considered acceptable transport accessibility is not sufficient for families who travel with children. The study also not only gave evidence for the strong impact of after-school activities as journey generators, but resulted in more detail about how parents choose after-school activities.

Another significant difference between the original and the updated conceptual framework is that the updated conceptual framework shows the everyday life co-ordination of families and how this influences their travel behaviour, in greater detail. I explained through the findings of my study how travel behaviour is embedded in everyday life, i.e. travel behaviour is a result of all the different types of factors that make up the system working together during family everyday life co-ordination. I found this process to be highly complex and characterised by relationality, fragmentation and fluidity. Family needs drove everyday life co-ordination. These needs were priorities and any obstacles to meeting them led to families using a number of coping strategies, also in their travel behaviour.

The findings show how the main factor 'Space-time constellations' of families are influenced themselves by families' wider everyday lives, as shown in the 'General factors' leading to the definition of 'Family needs', i.e. a family's priorities and aims, e.g. related to bringing up the children, providing the family income, etc., and resulting in the 'Choice of activities' and related destinations, timings and frequencies. These activities, in relation to the family's home location then constitute a family's space-time constellation, i.e. the journeys that families must master within their specific locational and time frames. This study therefore gives evidence for how travel behaviour is embedded in everyday life.

What the findings also revealed was that the process or 'doing' of a family's everyday life co-ordination by family members and other relevant individuals, was the arena where all factors and other elements of the system played out in context and dynamically. The study contributes new knowledge about how everyday life co-ordination works, i.e. shows it to be 'relational', 'fragmented', and 'fluid', and how families use 'coping strategies' to deal with friction and ambiguity in order to meet their 'family needs'. The result of this process are everyday life 'activities', such as going to work or school, and includes family 'travel behaviour'.

The study furthermore highlighted the significance of the experiences made during everyday life in general as well as everyday travel, and that these often have both a material and emotional side. Finally, 'material/emotional experiences' feed back into the general factors influencing family everyday life, especially via individual attitudes and social norms.

### 7.7 Potential for more sustainable family travel behaviour

From the analysis of the travel behaviour-relevant changes that were found in families' everyday lives, it can be concluded that car dominance is strong and not easily challenged, despite a willingness of most interviewees to consider alternative modes of transport. On the other hand, families' everyday lives are fluid and constantly evolving even if just minimally - e.g. children are growing up, the economy is evolving (both globally, nationally and at the household level) and policy is made - while families co-ordinate and live their everyday lives day in day out, all of which offers an environment for changes (including to travel behaviour) to take place. Still, the right, and sufficiently extensive, changes would have to take place in order for family travel behaviour to become significantly more sustainable.

Furthermore, what emerged through the interviews is that the current travel behaviour is not only environmentally, but also practically unsustainable. The flexibility that parents need in order to achieve their everyday lives, can to some extent be covered by the car, but driving is not a perfect solution, as there is congestion, risk of vehicle break down, cost of vehicle maintenance, etc., and many parents had to resort to cumbersome practices such as setting out far too early to beat rush hour traffic or rat running. This again points to the high level complexity of space-time constellations with a large number of widely dispersed destinations which need to be covered in limited time frames, something which is hardly manageable by any transport mode in the current set up of most families' everyday life co-ordination.

There are several characteristics of family travel behaviour, which need to be acknowledged when trying to understand how change could happen. Firstly, travel behaviour, as well as the potential to change must be seen from a household or family perspective, as changes in travel behaviour ultimately affect all family

members. This includes the consideration of the impact of relationality, i.e. any changes must fit with the whole family and any other people. For example, encouraging one parent to cycle more with children might meet hurdles if the other parent is not able to cycle or not convinced about cycle safety. Likewise, buying cycling equipment affects the whole household economy.

Every family household has a different set up of everyday life co-ordination, and it can be argued that, as car use is flexible enough to cater for families' different needs and levels of everyday fragmentation and individualisation, other modes of transport need to be as flexible in order to be adopted (Pooley et al., 2013). However, this study adds in-depth evidence that most families' everyday co-ordination is very complex, with complicated space-time constellations. This means that increased flexibility might not be an effective solution. It could therefore be argued that a reduction in this complexity may lead to an improvement in space-time capacity allowing families to adopt more sustainable patterns of travel behaviour.

The study also emphasised the significance of material and emotional experiences, i.e. people might take up new behaviours more permanently by trying them out and practicing them, which means that for the adoption of alternative modes of transport people need to have access to them and opportunities to use them. The performance and experiences made are the first step for people to continue a behaviour. A useful prerequisite, an interest in, detailed knowledge about and some experience of different modes of transport were held by nearly all interviewees, which means that families could relatively easily start to use alternative modes of transport. Again, however, complex space-time constellations limited any use of alternative modes of transport and would therefore need to be addressed at the same time.

Butler et al. (2014) have advocated that changes in behaviour need to be led by people, e.g. pioneers for alternative, innovative values and behaviours and who might give impulses for wider change in communities and society in general. There is some evidence of how new behaviours thrive more easily in certain communities (Barr and Prillwitz, 2014:4-5; Sahakian and Wilhite, 2013). Those communities tend to be strong, i.e. rich in resources, which enable people not only to learn about new behaviours but also try them out practically (Lave 1991; Lave and Wenger, 1991 and 2009, in Sahakian and Wilhite, 2013), as (such as seen from a practice theory

perspective, e.g. Shove, 2010) behaviours are constituted through repeated performance, and as shown as very important in this study, enabled and supported by social norms, which are by definition collective. These processes further link in with the power of examples seen and heard, such as images of sustainable transport practices and narratives. Visible measures are for example physical infrastructure changes, or the presence of people already practicing an alternative travel behaviour.

A community approach could also focus on wider aspects than those that are directly related to sustainable transport, such as values about parenting. For example, the promotion of the use of local over non-local amenities such as local schools, after-school activities or shopping can reduce the need to travel by car. Furthermore, work cultures could be addressed in order to accommodate more flexible, family-friendly arrangements. This study did not find many examples of sustainable travel behaviour among the families studied, however the few ones found were all supported by the 'community' in a broad sense, e.g. seeing others' practice such behaviours or noticing transport related objects in the environment, some respondents were inspired to try it themselves.

Overall, it has to be acknowledged that travel behaviour is set within a culture, including social norms, and served by popular narratives, and any changes in travel behaviour of the majority of the population need to have supporting social norms and narratives in order to be practiced. Some evidence was found for parents' interests which could lead to the potential use of alternative modes of transport. These included an interest in physical activity and being outdoors for their children and themselves, as well as in life skills to navigate traffic and transport in the public realm. Furthermore, general parenting values such as seeking to spend more quality time with children, could be used to promote more sustainable modes of transport. Many interviewees stated the pleasant experiences made when walking and cycling (also with children), as opposed to driving, which was rarely associated with being enjoyable.

None of the parents mentioned a concern with air pollution through car use, which their children might be exposed to, however, this could become a concern if the awareness around this topic increases, e.g. through the recent news about the extremely unhealthy levels of air pollution in London and the current Mayor of

London's plans to implement Ultra Low Emission Zones (Mayor of London, 2018). Although the topic of air pollution and its impacts is highly complex, narratives focussing on negative health impacts on children might have the potential for parents to make the 'right' choices (i.e. to drive less and keep children away from polluted areas), in the face of such uncertainty (Giddens, 1991; Guell et al., 2012).

Owning a (large) car was a social norm in the study area, and cars were status symbols, however, several parents questioned this and showed a potential interest in giving up car ownership, possibly replacing it with other forms of access to car use, such as car sharing. Buying an alternative fuel or low/zero emission car was rarely mentioned by parents, which is in line with families often buying 'opportunity cars', i.e. large, inefficient, but cheap second-hand cars often sold to them by relatives, friends or colleagues.

For new narratives to be strong and leading to social norms, all relevant institutions need to support them unambiguously. For governments, including local authorities, this does not only include having a strong sustainable transport policy, backed up by physical infrastructure investment, and co-ordinated with policies promoting flexible working, work-life balance, health and active lifestyle, but also a reflection on other policies, which run counter to this and favouring car use, e.g. education and housing supply and affordability. As pointed out by Butler et al. (2014), governments should acknowledge their own role in promoting unsustainable household practices when trying to promote more sustainable ones. This was mentioned by several interviewees, who tried to use their car less, however, who also accused their local authority of not promoting alternative modes of transport enough and favouring car use. Furthermore, families with two working parents, often felt let down by their council not supporting working parents, and not providing sufficient wrap around childcare options (e.g. one school only offered half-day nursery places and no after-school care), which led to increased volumes of driving for families. Jarvis, Pratt and Cheng-Chong Wu (2001) emphasised the need for policymakers to understand the everyday arrangements and coping strategies of people. "(…) a whole range of innovative and ingenious local solutions are made to the home-work problem by people in their households and communities. The problem is that these are ignored in

the engineering mind-set, often working against them." (Jarvis, Pratt and Cheng-Chong Wu, 2001:24).

The micro-arrangements of everyday life co-ordination in family households are significant, but they are also set within wider society. The potential for change of travel behaviour is likely to differ for each family, due to their differing everyday life co-ordination (Jarvis, Pratt and Cheng-Chong Wu, 2001:3), however most families' travel behaviour was influenced by the same spheres of work, school and childcare, as well as after-school activities. Therefore, changes at the level of the individual or household, must be supported by changes in policy and social environments to be effective (Watson, 2012; Shove, 2010). This means that the factors which override potential changes towards sustainable travel behaviour, e.g. the aim to choose a good school and good after-school activities, the urge of parents to 'be there' for their children, as well as using the car due to generally feeling stressed or unable to cope, all often leading to more car use, have to also be taken into account from a wider society and policy perspective.

Societal changes must be sufficient in scope and extent in order for significant increases of sustainable travel behaviour of families to happen. The analysis of interviews showed some of the ways in which families make their travel behaviour work, by using coping strategies to navigate obstacles in order to serve family needs. Some of these coping strategies are employed to achieve more sustainable travel behaviour, and could be further encouraged and supported, such as lift sharing and childcare swapping among families, car sharing, and the employment of special equipment to continue cycling with ever developing small children. However, apart from the fact that a behaviour which leads to reduced car use, such as lift sharing, still is based on and reinforces car use, such coping strategies were usually not very stable, i.e. not enough to overcome obstacles entirely, which is why sustainable transport hadn't taken hold among the studied families. For example, when a chosen school was not in walking distance in the first place, a change to more family-friendly working patterns had not resulted in any more sustainable travel behaviour.

Jarvis, Pratt and Cheng-Chong Wu (2001:74) point to the need for different societal spheres to become better matched and co-ordinated to allow for more sustainable urban development. This study confirms this need. Spheres which have a significant

impact on travel behaviour, such as work, school, childcare and after-school activities, need to be better co-ordinated, to improve families' space-time constellations and give more time to use more sustainable modes of transport which are often slower than using the car. Measures should target physical changes as well as those affecting cultures, including social norms. This means that policy for more sustainable travel behaviour among families must be co-ordinated spanning a number of sectors and considering levels from the micro-level of the individual and household to communities and wider society, including local, regional and national government.

All the above points to the fact that for travel behaviour to significantly change, a number of changes in different spheres of society both the micro and macro-levels would need to happen (Butler et al., 2012), possibly in the form of the pervasive societal changes that Shove (2010) said would be required. While Watson (2012) might agree with Shove on the drastic changes in travel behaviour needed, the singular changes in different elements of a practice he mentions, e.g. the introduction and adoption of a new technology or changes in people practicing a behaviour, would most likely be insufficient for family travel behaviour to change. In fact, it is not so much a system of practices (as referred to in practice theory) that needs to change, but the system of family everyday life co-ordination and underlying social norms around work, school, childcare and after-school activities, which would enable changes in travel behaviour. Weisner (2009:228) and Goodman et al. (2012) have also stated that any new behaviours need to fit in with existing contexts, and flexibly absorb changes of these contexts, in order to become more permanent. However, the evidence of the studied families points to significant contextual changes that must take place first, in order to accommodate any increase in sustainable travel behaviour.

### 7.8 Measures that could lead to more sustainable travel behaviour

The following section offers some tentative ideas about what measures could be useful for family travel behaviour to become more sustainable. However, it is difficult to predict how or whether such change would happen, as the recommendations are based on the limited evidence of change among the families studied, and on observations within contexts that have yet to change. How such measures work in detail, including the use of planning, regulatory, economic or awareness raising tools,

was not within the scope of this study. The measures suggested in this section are car use limiting regulation, encouraging the uptake of low/zero emission cars and car sharing, and the reduction of space-time complexity.

**Car use limiting regulation**

Generally, strict regulation limiting car use was seen to be very effective in the case of this London suburb, where travel into Central London was affected by the congestion charge, parking limitations as well as very good public transport provision, leading to any parent travelling into Central London to either take public transport or cycle. Some mothers mentioned the council's planned (however later abandoned) introduction of more restrictive parking regulation in Central Wanstead, which would have forced them to either park further away from their destinations or to take public transport. However, such policies are very rarely implemented, as they often are - at least initially - very unpopular. It might be useful for such regulation to be linked to the promotion of families' interests such as physical activity and health, e.g. lowering air pollution around schools.

**Uptake of low/zero emission cars and car sharing**

All families studied were to some extent dependent on car use and the majority owned larger, more emission-intensive cars. Exchanging those with low/zero emission car models, offers the potential to reduce transport emissions, however only if life cycle greenhouse gas emissions of such cars continue to reduce. Most families lacked information about low/zero emission cars, and had mainly focussed on cost and large size when they had chosen their current vehicles. These aspects would have to be addressed. Some low/zero emission cars would also require an increase in infrastructure such as fuelling stations. In order to address local car culture, low/zero emission cars would also have to qualify as status symbols.

None of the families said that they would be able to manage their everyday lives without access to a car, however, several families said that they wouldn't need to own a car but could share a car with others. There was significant interest for formal car sharing schemes, which were however not available in the study area (although some interviewees had previous experience using such schemes when they lived in more urban areas). Other interviewees said they would be interested in an informal,

private agreement with one or several neighbours for car sharing. All families emphasised that a car should be available in front of their house or nearby, and that schemes should also cover car rentals for weekend and holiday trips. Further to this, car use could become part of a complete transport service, covering access to all modes of transport.

**Reduction of space-time complexity**

Families' space-time constellations must change to better accommodate the use of other modes of transport than the car. Measures to this effect in the area of planning include the location of after-school activities at or near local schools and near each other, with harmonised timings, the co-location of local primary and secondary schools, walking and cycling routes directly between homes, workplaces, schools and after-school activities, including swimming pools, as well as easy to use and safe cycle parking near homes and important destinations. Public transport services need to be frequent, fast and connecting family-relevant places directly. Apart from leading to shorter distances travelled, such measures could be aimed at reducing the fragmentation and individualisation of family everyday life, e.g. if more families used amenities in similar locations and at similar times, provision of useful infrastructure could be achieved more easily. This would also help with the organisation of different siblings' activities, as well as lift sharing and childcare swaps among parents.

Swimming is a special activity, as it takes place at pools which have large catchment areas. Nearly all children of the studied families have swimming lessons, typically once a week, which means that the total volume of journeys to swimming pools is large. The study area lacked its own local public swimming pool as well as quality gym, which is why many parents took long journeys to such private gyms in other areas and, as they already had membership at this gyms, also took their children there for swimming lessons. Swimming would cause the least additional car journeys if it was part of the school curriculum and offered on a weekly basis throughout all school years.

The main issue that led to using the car for the journey to and from school was that most parents chose what they perceived as the best or most suitable school available to their child(ren), which often wasn't in walking distance. The underlying condition was that there were large quality differences between local schools perceived by

parents. This was supported by Ofsted inspection reports and related school ratings, which encouraged parents to aim for a place at one of the usually few schools rated 'outstanding'. Abandoning 'outstanding' ratings as well as a larger change towards a more even provision of similar, good quality schools might lead to more parents choosing their local school in walking distance. Generally, narratives around parenting, including what defines good education, including after-school activities, might need to be challenged in order to decrease the need for travel. A more drastic measure would be to abandon free school choice, i.e. children would only be offered a place at their nearest school. Of course, any implications of such new regulation would need to be assessed, e.g. binding families to their nearest school might increase local polarisation of popular and unpopular schools further.

A major cause for parents to rely on the car for school journeys was the mismatch of work and school times, coupled with the distances between home, nurseries and schools, and workplaces. More employers offering sufficiently flexible, family-friendly work patterns, e.g. well within school hours and during term-time, might be effective in reducing car use to schools and nurseries. A culture change would be needed for better acceptance of family-friendly working hours for both fathers and mothers.

Additionally, better wrap around care could be in demand, too, especially care which satisfies parents' high-quality standards (e.g. favouring sports and outdoor activities over those which prolong days inside school). Nannies were sometimes mentioned as a preferred, personalised childcare option, as they can care exclusively for a family's child or children, outside school and including at the family's home. However, many families said they could not afford a nanny, and generally aimed to keep childcare costs to a minimum.

Generally, public transport would be used more, with improved quality of service. Main improvements would be, as mentioned above, a greater number of fast and frequent services to relevant family destinations, but also more comfortable and less crowded vehicles and lower fares. Public transport should offer good mobile and Wi-Fi reception as well as potentially dedicated work or family spaces in its vehicles. Narratives related to the cost of public transport, compared with and in addition to car costs, should also be addressed. As mentioned above, complete mobility services could be attractive for families. Parents might be more likely to use alternative modes

of transport if they felt that one monthly payment could cover the use of a range of modes of transport rather than that using alternative modes of transport incurred additional, unwanted costs further adding to the costs of using a car. Furthermore, more use of real-time departure as well as route planning apps for mobile devices could change perceptions of how fast public transport is compared to car use.

Organised, trusted school transport (such as common in the US, as mentioned by one interviewee) would potentially be welcome by parents and reduce car use to schools. There is especially large potential for schools with a larger intake area, such as commonly is the case in independent and faith-based schools. Organised transport between schools and after-school activities could be another option.

Also, many families had an interest in cycling more, in parks and on roads, but felt it was unsafe. Better road cycling infrastructure, potentially with segregated, safe cycle lanes could make a difference, however the quality of such infrastructure would have to be high, e.g. lanes would have to be seamless and not suddenly stopping along the way or being obstructed by parked cars, as often is the case with existing cycle lanes. Access to cycling equipment to cover all stages of children's development could be increased, such as to bike seats, trailers, cargo bikes and electric bicycles. Innovative bike rental schemes including bikes and equipment for cycling with children could also play a role, for example covering spontaneous one-way trips. Furthermore, some parents thought that it took several years to accomplish cycling proficiency of all family members. More cycle training for the whole family could be effective in increasing cycling skills and confidence.

**Conclusions on the potential for change in family travel behaviour**

This study showed the most important factors and issues influencing family travel behaviour, which could, if changing, also become more environmentally sustainable. The most important influencing factor was first and foremost the space-time constellations of families. It is however difficult to predict *how* change would happen, because not much evidence for actual change resulting in more sustainable travel behaviour was found among families in this study, reflecting the lack of change in travel behaviour in the UK in general. Still, this study allows for some conclusions to

be made on potential change towards sustainable travel behaviour of families, and measures to achieve it.

While car use comes with its own weaknesses, it was still found to be the most stable mode of transport in families' everyday lives. The car system is dominant and reproduced through continued practice. It is interrelated with all other spheres of society related to family everyday life, especially work, education and childcare as well as after-school activities. It can be assumed that both bottom-up and top-down initiatives across all spheres and sectors would have to work together to successfully challenge this system and lead to more sustainable travel behaviour of families. Measures would have to look at the space-time constellations of families and furthermore at the physical environment, e.g. improvements of infrastructure, as well as at cultural aspects such as narratives and social norms.

It is clear that, not only attitudes or individual behaviours need to change, but the system in which society operates needs to change in order for travel behaviour to be sustainable. Changes in single elements, e.g. an emergence of alternative values and social norms, as offered by Butler et al. (2014), can be catalysts for change, but are unlikely to be far reaching enough, unless also material and social contexts change. Measures aimed at policy makers were suggested, however governments also need to acknowledge their impacts more completely (Butler et al., 2014), i.e. they need to resolve any contradicting policies and perverse incentives.

Some research suggested the need for more variety and flexibility in the offer of general as well as transport services, especially sustainable ones, for more of the latter to be taken up by families (Pooley et al., 2013; Jarvis, Pratt and Cheng-Chong Wu, 2011). This study supports these suggestions. However, it must be considered that such adaptation can also further reinforce fragmented and individualised everyday lives of families, which underlie unsustainable travel behaviour patterns. There could be some scope for solutions which simplify family everyday life, or even reach beyond families by applying a coherent vision of 'accessibility for everyone' (e.g. led by the needs of children and disabled people), or similar.

Looking at all elements in a system, suggests that all of them can or should be questioned, e.g. the answer to getting families to use the car less might not lie in any of the existing modes of transport; perhaps new modes of transport have to be

invented (e.g. multi modal transport services) or at least some niche modes might have to be adapted to better serve families, e.g. electric bicycles, cargo bikes, or car sharing schemes.

# 8 Conclusions and reflections

The final chapter of this thesis presents the conclusions of this study in the light of the original four research questions. The research findings are then used to comment on the aims of the London Mayor's Transport Strategy 2018-37. Reflections on the methodology used are summarised, and potential areas for further research highlighted. The chapter concludes with a summary of the original research contribution of this study.

## 8.1 Conclusions in light of the original research questions

The original research questions of this study were:

> **Question 1**: What are the characteristics of the travel behaviour of families in outer London?
>
> **Question 2**: What underlying factors influence travel behaviour of families in outer London?
>
> **Question 3**: How can travel behaviour among families in outer London become more environmentally sustainable?
>
> **Question 4**: How can an everyday life perspective enrich our understanding of travel behaviour?

These will be addressed in the following sections with regard to how the results of the study contributed to answering them.

**Research question 1:**

**What are the characteristics of the travel behaviour of families in outer London?**

Firstly, it has to be acknowledged that the characteristics that were found of the travel behaviour of families in outer London, were limited to the case of the specific circumstances of the sample of families who almost all lived in the same four adjacent neighbourhoods in one outer London suburb, i.e. an affluent, attractive area with local highstreets and amenities with opportunities for everyday travel by several alternative modes than the car, including the use of a number of bus and railway

routes as well as quick access to Central London on the Underground from several stations in the study area.

This means that conclusions cannot be straightforwardly generalised to other suburban or outer London areas, and might not be specific to suburbs, but might also apply to some urban or rural areas. Nevertheless, car use from the study area into the metropolitan centre (Central London) was limited through the congestion charge and parking regulations, which is specific to London and impacts on the travel behaviour of outer London suburban residents. Also, the study's focus was limited to families with at least one child at primary school age, i.e. how family travel behaviour works might be different for families with older or younger children.

Driving a car was the mode of transport most commonly used by families, however, not exclusively, as most families also regularly used other travel modes. This hadn't changed much after two years (for the families who were interviewed twice). One family did not own (but still sometimes used) a car, however, they constituted an outlier case. Work, childcare, school and especially after-school activities were the most frequent destinations for families, with large numbers of journeys and kilometres travelled by many families.

The study also showed some of the particular characteristics of the travel behaviour of families. These included the impact of the ever changing abilities of children, which often limited what could be considered accessible for the studied families, contributing to the likelihood of families to drive.

**Research question 2:**

**What underlying factors influence travel behaviour of families in outer London?**

The study showed that one way to understand family travel behaviour and identify how different elements interact, was to take a wider everyday life perspective, within which travel behaviour can be located in its entirety, including the use of all kinds of transport modes. It was suggested to look at the system of everyday life co-ordination at the micro-level of family households, rather than at isolated modes of transport used by individuals.

A number of different types of factors were found to influence travel behaviour, and these worked together in many different constellations, depending on family. Space-

time constellations were most often the main reason for families to travel as they did, i.e. in order to make it to many destinations in sometimes considerable distance, within the time frames available each day, many families used the car. However, it was interesting to see that these space-time constellations, which included physical parameters, were also related to underlying social and cultural parameters, such as social norms. Therefore, while also this study could conclude that individual attitudes usually didn't directly lead to families' travel behaviour, it showed that individual attitudes in their relationship with social norms were influential for how families co-ordinated their everyday lives, and for their choice of destinations, i.e. it was shown that physical and social factors were inextricably linked in influencing travel behaviour. Another significant finding was that, while it was useful to focus on the everyday lives of families, more long-term decisions, family values, as well as the aforementioned social norms, were part of the basis of these everyday lives and family travel behaviour within it.

Several everyday life spheres were found to influence family travel behaviour in different ways. These included work (i.e. work cultures and the mismatch of work and school hours), as well as parenting (e.g. social norms on parenting leading to choices of childcare, schools and after-school activities, often leading to extensive volumes of travel). Relationality is another characteristic of family travel which cannot be ignored, and a wider, more practical definition of family was suggested to use when researching everyday travel. Material and emotional experiences were found to be highly significant although did not act as primary influences for the outcome of travel behaviour.

Although every family's everyday co-ordination was different, the majority of families had extensive car use in common. Car use was not found to be a deliberate preference, as it was rarely commented on in a positive way. It was often the least problematic of travel modes available for families to go about their everyday lives and satisfy family needs. It was also established that even car use came with significant problems which puts into question the sustainability of the car system.

All of the factors found to influence family travel behaviour are interrelated and can therefore be usefully conceptualised as a system.

**Research question 3:**

**How can travel behaviour among families in outer London become more environmentally sustainable?**

The study confirmed a large potential for families to practice more sustainable travel behaviour, i.e. travel behaviour characterised by drastically reduced car use. The level of knowledge about alternative modes of transport, especially local public transport, was high among all the interviewed parents. Most also had some experience of using alternative modes, including many who had regularly cycled, especially during their youth. Most interviewees showed an interest in using alternative modes of transport more, including walking, cycling and car sharing. Furthermore, most interviewees did not describe car use positively, in fact, the study results identified the car system as malfunctioning and potentially unsustainable.

In addition to measures that have so far mostly been employed in policy (such as improvement of infrastructure (e.g. Sersli et al., 2020), mixed-use high density development (e.g. Gascon et al., 2020), or awareness raising), change could also be facilitated by an increase in importance of several of the narratives identified, such as that children (and adults) need more physical activity, and that children should learn to navigate public spaces, with independent travel seen as a life skill. As social norms were very influential, not only narratives which support alternative modes of transport, but also counter-narratives to existing car use narratives, and any weaknesses of the latter, could be influential in changes in family travel behaviour. Social norms and narratives are part of local cultures, which points to community-based strategies as being promising in leading to travel behaviour change. Furthermore, changes are likely to happen if they are supported by practical experiences of alternative travel modes.

Judging from the results of the study on how travel behaviour generally came about, however, drastic and wide-ranging societal changes are needed for change to happen. This contrasts with the findings of Thornton et al. (2011), whose study (referred to in Chapter 1, Introduction) found the same large potential for change in travel behaviour of (at least 'educated, suburban') families, however suggested that this potential could be realised by implementing fairly isolated, transport-specific

policies such as information provision, economic incentives and the development of new infrastructure.

In this study, it was found that supporting change at the micro-level, i.e. individuals and households, as well as within communities (e.g. by communally re-imagining transport modes such as cycle sharing (Nixon and Schwanen, 2019); by acknowledging parents' counter-narratives to functioning automobility (Mc Laren, 2018); or by encouraging the practice of an alternative transport mode by families (Sersli et al., 2020), is important, but will only lead to more sustainable travel behaviour if changes also happen at higher levels and spheres in society, e.g. not only around transport itself but also around work, education, childcare and after-school activities (e.g. Meinherz and Binder, 2020; Sersli et al.. 2020). Changes need to take place both within cultures as well as physical infrastructures and involve policymakers as well as other citizens and communities. Vietinghoff (2021) for example advocates for increased inclusivity of transport policy by applying holistic and inter-sectional analyses to families' travel behaviour. Bloyce and White (2018) emphasise the need for policy to take into account lived realities of people, as well as for policy to be better co-ordinated across sectors and departments to increase its effectiveness. The latter is also demanded by Hrelja, Khan and Pettersson (2020), using an approach of collaborative governance. Marsden et al. (2020) optimistically point to a possibly greater potential for people to change their travel behaviour than what is often assumed in policy, and recommend to study the innovative ways people adapt during disruptive events.

Changes which make families' space-time constellations more favourable towards the use of sustainable transport, such as the provision of infrastructure or more flexible working opportunities are needed, but so are cultural changes regarding social norms, in order to be most effective. In summary, these changes must be pervasive enough to lead to family travel behaviour to become more sustainable.

**Research question 4:**

**How can an everyday life perspective enrich our understanding of travel behaviour?**

For families, a large amount of travel is related to children, i.e. to schools, childcare and after-school activities. Neither childcare and after-school activities, nor family

travel behaviour in general, had been much researched in a comprehensive way at the time of this study, considering all the family members' journeys, to all kinds of destinations. The methodology used in this study succeeded in facilitating a contribution of more exploratory knowledge about family travel behaviour. This was achieved by using an everyday life perspective, i.e. seeing family travel behaviour within families' everyday lives.

Using an everyday life perspective, influencing factors from the spheres of work, childcare, school and after-school activities, and underlying social as well as physical factors and their interrelationships, could be identified. The focus on the household, and use of qualitative, in-depth interviews enabled a micro-perspective which captured relationality among family members and others, and interviewees' subjective views and experiences as expressed through the narrative that emerged from the interviews. Rich pictures of families' everyday lives, and travel behaviour embedded in it, which also included indications of longer-term life priorities, as well as the day-to-day practice of everyday life co-ordination, idiosyncratic to each family, could be assembled. These were found to be situated in their common wider societal contexts. Repeated interviews added some insights on changes in families' lives and potentially travel behaviour over time.

### 8.2 Research findings in the context of the London Mayor's Transport Strategy 2018-37

This study did not aim to evaluate policymaking for more sustainable transport, but it did confirm that current and previous policy have failed to induce the major changes in the everyday travel behaviour of families that are desperately needed. As outlined in the introduction, the reduction in greenhouse gas emissions from private car travel can be considered the most pressing goal. The focus however needs to be in the absolute reduction of car use and switch in particular to walking and cycling, as the uptake of electric cars would most likely not lead to the necessary emissions reductions, while also failing to solve other problems of car use such as congestion, risk of accidents and overdevelopment. In this final section of this chapter, I illustrate how the most current transport strategy for London, already seems to be again inappropriate for achieving the necessary changes in travel behaviour.

In 2018, the Mayor of London published a transport strategy for the period 2018-2037 (Mayor of London, 2018). The main focus is on the promotion of walking and cycling, as well as improvements to public transport. Still, in the light of the findings of this study, even this most recent strategy is unlikely to achieve its aims or any aims necessary to deal with the problems of everyday transport. This is for a number of reasons which are set out below.

Firstly, the strategy is still aimed at individuals, who are supposed to change their behaviour. As this study shows, travel behaviour and measures to change it to become more sustainable, have to be seen from a system perspective, including the impacts of relationality, and the characteristics of family travel behaviour as embedded in family everyday life co-ordination. Secondly, the main measure suggested to achieve travel behaviour change is the provision of better physical infrastructure ('healthy streets' (i.e. street environments that invite more walking and cycling) and improved public transport). The strategy fails to consider family everyday co-ordination and choices of school, after-school activities and other destinations which cause space-time constellations, and their underlying social norms and contexts. The latter extend beyond travel behaviour and transport planning, which would necessitate an interdisciplinary policy approach, of which there is no evidence in the strategy (apart from the integration of a public health perspective on travel). Some of the relevant issues found in this study are national in character, such as the Ofsted school inspections system, which would require a vertical policy co-ordination as well. Furthermore, while the Greater London Authority asks London borough administrations to implement the Mayor's Transport Strategy locally, some of the most important issues of school and after-school activity choices of parents cross boundaries into neighbouring boroughs, too.

Overall, the Mayor's Transport Strategy has set the ambitious goal of restricting motorised transport by making streets more attractive and safer for active travel, however, if the destinations which families choose continue to lead to complex space-time constellations which can only be managed through extensive car use, then this strategy will most likely not achieve its desired outcome.

Any change in travel behaviour in the medium term is more likely to be happen through a greater awareness among parents of the high air pollution levels and

serious associated health risks, affecting hundreds of thousands of children in many places in London, including some in outer London (Howard, 2015). A concern about air pollution has great potential to push people to use the car less – making it less acceptable to drive to school, and drive in general. As is increasingly known, air pollution can be particularly bad inside cars moving in traffic (Carrington, 2017), as well as in buses and Underground trains (Rivas, Kumar and Hagen-Zanker, 2017), which might further lead to people walking and cycling and choosing destinations which are walkable or accessible by bicycle. This is however in reality often difficult for families, who might still face car dependence due to their choices of good schools and activities, as well as need to travel to work.

The Mayor of London also has plans to introduce Ultra-Low Emissions Zones (ULEZ) which would, as part of a second phase, cover all of inner London, but not outer London (Mayor of London, 2018). While a ULEZ might lead to some effects in outer London, too, it is unlikely to lead to sufficient travel behaviour change to solve the most important problems associated with current car use for the whole of London.

The prominence of health issues in the strategy is important and also an increased awareness of the lack of physical activity among a large proportion of children in the UK (Department of Health, Physical Activity, Health Improvement and Protection, 2011) might lead to more active everyday travel among families. However, it could also lead to ever more driving to sports activities for children, if parents can't find any local options or can't incorporate physical activity into their everyday travel due to their circumstances, including their space-time constellations.

In summary, any strategy or policy which aims to contribute to travel behaviour change which is significant enough to solve problems such as climate change, air pollution and public health concerns must acknowledge and plan for family everyday lives, and consider those holistically – covering social aspects and contexts, as well as extending to leisure and long-distance travel.

### 8.3 Reflections on the research methodology used

The study methodology was successful in facilitating a detailed exploration of families' everyday travel behaviour, using in-depth qualitative interviews and a focus on everyday life co-ordination, resulting in some novel insights. Findings were to a

large extent coherent with elements of practice theory as well as with findings of other studies with a similar approach, however highlighted a system of family everyday life co-ordination, rather than of practices.

In retrospect, some minor mistakes related to the design of questions and the questionnaire could have been avoided by piloting the survey more widely. More organised prompting of parents to reply would have potentially increased the response rate. One low cost option for this, apart from asking teachers to remind children and parents, could have been to put up small posters in the reception areas of all schools asking parents to complete the survey, supply back-up copies of the questionnaire and participant information sheet at the reception for parents who had lost their original copies, as well as also asking reception staff to remind parents to complete the survey.

The convenience sample of interviewees was sufficiently diverse. However, similar to what was suggested for the survey, with additional measures to recruit interviewees, such as posters and leaflets at schools or approaching parents during school pickup times or at school events, to recruit more cases of double full-time worker households, more full-time working women, as well as families not owning cars or mainly using sustainable modes of transport, could have improved the variety of the sample.

The longitudinal aspect of the study was found useful. It didn't entirely succeed in studying change of families' travel behaviour, which could be better achieved by studying families over an even longer time period using more interviews, e.g. to further explore some of the emerging topics such as social norms or travel experiences. However, interviewing the same person twice proved very interesting, as it gave additional insights, or confirmed or challenged the importance of any issues mentioned in the first interview. Furthermore, one key result of the study was that there were few changes in families' travel behaviour.

The aim of the study was to examine family travel behaviour from a whole household perspective. While accounts from one adult of the family provided evidence for this to some extent, it could have been even more effective to do more interviews with both adults and potentially with the children of the household. Also, interviewing both partners together often resulted in one partner mainly steering the interview,

potentially as they had done the first interview with me already and were therefore more familiar with me than their partner was. Interviewing all adults in the household several times each (together or apart, or both) could have potentially improved the results. However, despite offering a wide range of possible interview appointments, including in the evening and at weekends, it proved difficult to arrange one, let alone two interviews with more than one family member present.

Also, family member dynamics were generally difficult to identify from interviews, even when interviews could be conducted with two partners, either together or separately. Other methods, e.g. travel diaries or ethnographic methods, meeting families on several occasions, could have potentially been useful to learn more about family members' dynamics. Another interesting perspective would have been to look more closely at all the different people involved in family life, and their influences or involvement in everyday travel, i.e. a focus on the family (with an extended definition) rather than on one main household. This was rejected in this study, in order to primarily focus on the household as the unit of analysis.

One aim for the interview was to avoid the framing of travel behaviour in terms of environmental sustainability, as interviewees were not to be made to feel guilty when talking about their car use, which could have limited their openness and resulting research insights. In the absence of me asking about it, environmental awareness was only mentioned by very few interviewees. However, it would have been interesting to bring up the environmental impacts of transport towards the end of the interviews, as environmental awareness was later identified – although in only a low number of families – as one potential counter-narrative, which could be relevant for changes towards more sustainable travel behaviour.

Validity and reliability of qualitative research evidence can be questioned, due to a low number of diverse cases and the inherent subjectivity of both the researcher and the interviewees. Steps were taken to increase the study's trustworthiness, including aiming to clarify interviewee statements and their meanings during the after the interview, making transparent processes of methodology choice, empirical research and analysis processes, as well as being conscious of the impact of the researcher's subjectivity (see section on 'Research quality' in Chapter 3 (Methodology)).

### 8.4 Outlook on potential further research

This study resulted in interesting and some novel insights about family travel behaviour, as well as raising questions which could be the starting points for further research on this topic.

For example, as mentioned in the previous section, when looking at families, it became clear that not only members of a family household, but also other people, from neighbours to relatives and friends, as well as professionals such as childminders and nannies played important roles in families' everyday lives and travel behaviour. Studies could benefit from a wider definition of 'family'. More research on family dynamics (including 'family' members in a wider sense) would be useful.

Also a wider perspective on family travel behaviour would be useful, i.e. including holiday travel by air or other modes and potentially a deeper focus on leisure travel in relation to family everyday life. Further research on families' travel to after-school activities of children is needed. Also, a potential trend for escorting secondary school age children by car could be investigated.

Cultural and social elements were found to play a main role in family travel behaviour. Further research on culture, social norms and narratives could illuminate the topic to a greater extent. Of interest are cultures around work, parenting, as well as environmental awareness. Also, the interrelationships of culture and physical and material dimensions, including families' space-time constellations could be useful. This supports the suggestion of Schwanen et al. (2011), who advocated the use of more social science research as part of transport and environmental or climate change research.

More research is needed to focus on changes in travel behaviour towards more use of sustainable modes of transport and how these could happen, e.g. studying families who already practice sustainable travel behaviour, or studying places where sustainable transport is used more. Practice theory and theories used in cultural economy studies could be applied to study such changes.

Travel behaviour of families in suburbs could also be researched more, e.g. comparing family travel behaviour in different suburbs of the same type, or in different types of suburbs. More research on suburbs and cultures within them would be useful. This

study for example highlighted that some families had strongly identified with some potentially more urban narratives, such as being environmentally conscious or not needing to own a car, when they still lived in more urban areas of London. It would be interesting to research the extent of differences of urban versus suburban narratives and their cultural impact on family travel behaviour in suburban areas, considering that the number of families who move to suburbs has increased with increasing property prices and unaffordability of property in the more urban areas of London.

In terms of methods, the use of in-depth qualitative interviews with semi-structured as well as more unstructured parts, proved very useful in exploring how family travel behaviour comes about. An option to maximise the exploration of this topic could be to use entirely unstructured interviews. Ethnography could also be applied, such as looking more intensively at experiences around everyday travel of families as well as social norms.

### 8.5 Original contribution to research

This study was original in that it investigated travel behaviour of family households from an everyday life perspective. This holistic perspective enabled a better understanding of how and why families travel in their everyday lives. As a starting point, family everyday life co-ordination was examined, which then led to evidence about family travel behaviour, and how it is embedded in everyday life. This process of enquiry has not been used before to study the travel behaviour of families with children, as far as I know.

The study managed to uncover a number of relevant elements and aspects influencing family travel behaviour, and presented them as part of a whole system of family everyday life co-ordination. Types of elements as diverse as physical parameters, social norms, policy and emotional experiences were shown to interrelate to produce family travel behaviour. One of the most important findings was that both physical parameters and individual, social and cultural factors influence travel behaviour, and that they are interrelated. The study also shows how travel behaviour is embedded in a complex system of everyday life co-ordination, which connects several spheres such as transport, home life, work, education and housing.

These spheres have been shown as inextricable, however, are often dealt with in separate silos within research and policy.

The study's results confirm many of the factors influencing travel behaviour that were found in previous research. However, this study presents these factors and their linkages as part of a rich, qualitative case study, i.e. in context, and using interviewees' subjective accounts about their everyday lives as the lens through which also travel behaviour is examined.

This study adds new, strong evidence for the need to use an everyday life perspective of family travel behaviour. The current, most widely used research and policy approach, which aims to appeal to individuals to voluntarily change their travel behaviour (what Shove calls the paradigm of ABC – attitudes, behaviour and choice (Shove, 201:1278)) is rejected by the findings of this study. This study shows that only by applying a holistic everyday life approach are we likely to tackle the complex issue of travel behaviour change.

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# Appendices

# Appendix 1

# Survey questionnaire

## Everyday travel of families in Wanstead, Snaresbrook and South Woodford

## Parent survey

OXFORD BROOKES UNIVERSITY

Please fill in this questionnaire, put it into the envelope provided and return it to your child's school by **Monday, 10th December**. Please fill in **one questionnaire only** (in case you received more than one). You can also send the questionnaire by post to Iris Gust, Oxford Brookes University, Department of Planning, Room AB201, Headington Campus, Gipsy Lane, Oxford, OX3 0BP.

**1. How many of the following vehicles are there in your household?**
(Please write a number in each box)

Cars or vans ☐
Motorcycles/scooters/mopeds ☐
Bicycles ☐

**2. Does anyone in your household (including you) have any impairment which restricts physical mobility?**
☐ Yes ☐ No

**3. Think about the past seven days: What mode(s) of transport have you used and for how many trips?**
(A trip is a journey between two points, e.g. walking to the station is one trip by foot. Driving to work and back are two trips by car, etc.)
(Please tick any modes used and fill in number of trips)

- ☐ Car/van, for ____ trips
- ☐ Motorcycle/scooter/moped, for ____ trips
- ☐ Bicycle, for ____ trips
- ☐ Barclays Cycle Hire, for ____ trips
- ☐ National Rail, for ____ trips
- ☐ London Underground, for ____ trips
- ☐ London Overground, for ____ trips
- ☐ Bus, for ____ trips
- ☐ Taxi/minicab, for ____ trips
- ☐ On foot, for ____ trips
- ☐ Other (please specify), for ____ trips

**4. What mode(s) of transport would you like to use more for your journeys?** (Please tick all options that apply)

- ☐ Car/van
- ☐ Motorcycle/scooter/moped
- ☐ Bicycle
- ☐ Barclays Cycle Hire
- ☐ National Rail
- ☐ London Underground
- ☐ London Overground
- ☐ Bus
- ☐ Taxi/minicab
- ☐ On foot
- ☐ Other (please specify)

**5. Are you in paid employment?** ☐ Yes ☐ No (If you answered 'No', please go to question 8.)

**6. If yes, do you work:** ☐ full-time ☐ part-time?

**7. What is the one-way distance between your home and your workplace?** (Write '0', if you mainly work from home)
☐ miles

**8. Which of the following factors influence you most when you choose your mode of transport?**
(Please choose up to a maximum of **five options**. Please indicate the order of importance, i.e. putting **"1" for the most important factor**, **"2" for the second to most important factor**, etc.)

- ☐ Convenience
- ☐ Weather
- ☐ The mode of transport that people most commonly use where I live
- ☐ Health benefits
- ☐ Cost
- ☐ Transport mode that expresses my identity
- ☐ Attractiveness of environment on the way
- ☐ Safety
- ☐ Distance to be travelled
- ☐ Feeling of freedom
- ☐ Environmental impact of transport mode
- ☐ Speed
- ☐ The modes of transport that family and friends use
- ☐ Flexibility
- ☐ Privacy while travelling
- ☐ Habit
- ☐ The modes of transport that my colleagues use
- ☐ Knowledge of how to get to destination
- ☐ Distance to public transport
- ☐ My child(ren)'s preferences for transport modes
- ☐ Time available
- ☐ Enjoyment

*Please turn over*

*REF:*

## Personal information

**9. What is your sex?**
☐ Male
☐ Female

**10. What is your age group?**
☐ 18-24 ☐ 25-34 ☐ 35-44 ☐ 45-54
☐ 55-64 ☐ 65-74 ☐ Over 74

**11. To which of these ethnic groups do you consider you belong?**

**White**
☐ English/Welsh/Scottish/Northern Irish/British
☐ Irish
☐ Gypsy or Irish Traveller
☐ Any Other White background (please describe)

**Mixed / multiple ethnic groups**
☐ White and Black Caribbean
☐ White and Black African
☐ White and Asian
☐ Any other Mixed/multiple ethnic background (please describe)

**Asian / Asian British**
☐ Indian
☐ Pakistani
☐ Bangladeshi
☐ Chinese
☐ Any other Asian background (please describe)

**Black / African / Caribbean / Black British**
☐ African
☐ Caribbean
☐ Any other Black/African/Caribbean background (please describe)

**Other ethnic group**
☐ Arab
☐ Any other ethnic group (please describe)

**12. How much is your combined gross household income per year?**
☐ Less than £10,000 ☐ £10,000-19,999
☐ £20,000-34,999 ☐ £35,000-49,999 ☐ £50,000-74,999 ☐ £75,000-99,999 ☐ £100,000-124,999
☐ £125,000-149,999 ☐ £150,000 and more

**13. Do you live together with a partner?**
☐ Yes ☐ No

**14. Which of these qualifications do you have?**
(Please tick **every** box that applies if you have **any** of the qualifications listed.
If your UK qualification is not listed, tick the box that contains its nearest equivalent.
If you have qualifications gained outside the UK, tick the 'Foreign qualifications' box and the nearest UK equivalents (if known).)

☐ 1-4 O-levels/CSEs/GCSEs (any grades), Entry Level, Foundation Diploma
☐ NVQ Level 1, Foundation GNVQ, Basic Skills
☐ 5+ O-levels (passes) / CSEs (grade 1)/GCSEs (grades A*- C), School Certificate, 1 A level/2-3 AS levels/VCEs, Higher Diploma
☐ NVQ Level 2, Intermediate GNVQ, City and Guilds Craft, BTEC First/General Diploma, RSA Diploma
☐ Apprenticeship
☐ 2+ A levels/VCEs, 4+ AS levels, Higher School Certificate, Progression/Advanced Diploma
☐ NVQ Level 3, Advanced GNVQ, City and Guilds Advanced Craft, ONC, OND, BTEC National, RSA Advanced Diploma
☐ Degree (e.g. BA, BSc), higher degree (e.g. MA, PhD, PGCE)
☐ NVQ Level 4-5, HNC, HND, RSA Higher Diploma, BTEC Higher Level
☐ Professional qualifications (e.g. teaching, nursing, accountancy)
☐ Other vocational/work-related qualifications
☐ Foreign qualifications
☐ No qualifications

**15. How many adults and children live in your household?**
(Please write numbers into the boxes below)
_____ adults _____ child(ren)

**16. How old is your child/are your children?**
(Please write the age(s) into the box below)

**17. What is the postcode of your home address?**
(Please write into the box below)

**18. How many years have you lived in this area?**
(Please write number of years into the box below)

☐ **I am interested in taking part in an interview about everyday travel behaviour. Please send me more information to the following e-mail address/tel.nr.**:

Please tick the box above and provide your e-mail address (or telephone nr.) if you would like to **participate in an interview** related to this research project. The interview will cover your experiences and motivations related to you and your family's everyday travel, no matter what modes of transport you use. What you say in the interview will be treated confidentially. I would be very grateful for your contribution. Best wishes, Iris Gust, PhD Researcher, Oxford Brookes University. **Thank you very much for taking time to answer this survey!**

# Appendix 2

# Interview guide

*Note: this interview guide was used for first and second interviews. In second interviews more focus was put on the potential for more sustainable travel behaviour of interviewees and their families, as well as on any life changes that had occurred since the first interview.*

**Introductory question**: *Tell me about a typical day in the week – what do you do and where do you go?*

**Interview topics**

Questions are asked or prompts given in order to cover the following topics. These are asked in any order that fits the natural flow of the interview.

1) **Weekday journeys**: destinations and times (e.g. work, nursery, school, shopping, friends and relatives, after-school activities, hobbies, classes, etc.)
2) **Leisure journeys**: destinations and times (e.g. at the weekend or for holidays)
3) **Modes of transport** used
4) **Work and household work**: Working patterns and organisation among parents, both for paid employment and household work
5) **Child care**: How do parents organise themselves? Who is doing what (e.g. bringing and picking up children from school)? Who else is involved in taking care of the children? Do interviewees give lifts to other people?
6) **Routines and organisation**: Do interviewees mainly have a set routine for their everyday life or do they plan each day individually?
7) **Time pressure**: Do interviewees feel time-pressured in their everyday life?
8) **Preference for modes of transport**
9) **Car use and ownership**: Would interviewees consider not having a car?
10) **Life course**: how have interviewees travelled from when they were children and until today? Incl. when did they have a car for the first time (if applicable).
11) **Area**: How come interviewees live where they live? Was this their preferred area? What do they like/dislike about the area?
12) **School and after-school activity choice**: Why did interviewees choose the school that their child goes to? What would be their choice of secondary school and why? Why did interviewees choose the after-school activities that their child goes to?
13) **Future changes**: Will interviewees and their families move again? Are the parents' work locations and working patterns likely to change?

**Final question***: If there was anything that would improve your everyday life what would that be?*

**Background information check**: exact **ages of interviewee and partners** (only ranges were asked for in the survey), **sex of children**, **job titles** and **working patterns of parents** (i.e. days and hours of work) and **car make and model**.

# Appendix 3

## Family summary - example

| | |
|---|---|
| **Name** | **'Emma' ([real life name])** |
| **School** | [School] |
| **Children's ages** | 4, 4, 6 |
| **Hh income** | £150k+ (husband only) |
| **Car** | 1 ([car make and model]) |
| **Work** | Emma: not employed<br>Husband: f/t |
| **Mode to work** | Emma: n/a<br>Husband: bus, tube, tube to Canary Wharf |
| **Mode to school** | Emma is solely responsible for the school journey. She often drives (9 mins) as it would be a 34 min walk. Recently she tried to walk to bus, take the bus to school and run back. |
| **Mode to ASAs** | One ASA (drama, son) local to home (walk). 1 swimming in Chigwell (7 miles/24mins drive).<br>2 ASAs (drama and tap dance, girls) in Wanstead, drive).<br>Emma goes to gym in Chigwell (how many times a week?) (7 miles/24mins drive) |
| **Leisure trips** | Her parents in Loughton. Holidays by car within England (Isle of Wight, Northumberland). His parents in the US by plane. |
| **Main factors** | INDIVIDUAL (environmental attitudes) + COST<br>Emma and husband made it a lifestyle choice to only have one car, due to cost and environmental reasons |
| **Other factors** | INDIVIDUAL (travel and health attitudes): Emma usually drives but at the same time convinced about giving her children extra exercise by not driving but walking and cycling.<br>E.g. CONTEXT (regulation): as she expected more stringent parking regulations around their school, she started to walk to the bus, take the bus to Wanstead and then walk to playground and school, and run back home, for the exercise.<br>INDIVIDUAL (travel and health attitudes): She would take the twins on her bike seat and trailer with son cycling behind, however, made possible by CONTEXT (cycle friendly environment) of being able to cycle through park and then on the wide pavements of Wanstead High Street, i.e. she only cycles on pavement.<br>CONTEXT (children with different timetables) of having to pick up daughters from nursery at midday, then son at end of day would probably deter her from cycling to school in the first place.<br>INDIVIDUAL (school choice): They didn't choose their local school because they thought the other school was better ➔ it is not in walking distance. |
| **Environ-mental sustain-ability of travel behaviour** | **Travel behaviour** is **very unsustainable**. She usually drives, however tries to walk, cycle or walk and bus wherever she can when she is with her children to give them exercise. However, she uses a gym 7 miles from home for herself and children's swimming (long journey by car). Husband takes tube to work.<br>**Main drivers for Emma** are INDIVIDUAL (travel and health attitudes): Emma is a habitual driver but at the same time convinced about giving her children extra exercise by not driving but walking and cycling.<br>This is made possible by CONTEXT (cycle friendly environment) of being able to cycle through park and then on the wide pavements of Wanstead High Street, as she will only cycle on pavement.<br>CONTEXT (children with different timetables) of having to pick up daughters from nursery at midday, then son at end of day would probably deter her from cycling to school in the first place.<br>INDIVIDUAL (activity preference): chooses a gym in 7 miles distance away for herself and children's swimming.<br>Emma and husband made the lifestyle choice of only having one car (INDIVIDUAL (cost; environmental consideration))<br>**Husband's main driver** is CONTEXTUAL (regulation): congestion charge and parking regulations make him take the tube to work. |
| **Summary** | **Very unsustainable travel behaviour** due to INDIVIDUAL (health attitudes) wish to give children exercise by walking and cycling where possible, which often overrides INDIVIDUAL (travel attitudes) factor of Emma being a habitual driver.<br>However, her sustainable travel behaviour is for some journeys made possible by CONTEXTUAL (cycle-friendly environment) as she only feels safe cycling on pavement.<br>Also INDIVIDUAL (cost; environmental considerations) they made lifestyle choice to only have one car.<br>And CONTEXT (lack of parking at work) means husband takes public transport to work. |
| **Potential for change** | - Interest in ST for exercise is there. Also lifestyle (cost and environmental consideration) choice to only have one car.<br>- Potential for more cycling with children if cycle infrastructure between and within Aldersbrook and Central Wanstead was better.<br>- She would like to have a system of 'trusted' school buses like in the US.<br>- Need for better local amenities.<br>- Leisure trips by train? |

## Appendix 4

## Interviewees' survey responses

| Single parent households | Name | Sex | Age | Ethnicity | Edu | Work | F/t or p/t | Adults | Hh income | Children | Ages | Mob imp | No of cars, motorcycles, bicycles | Main modes used in last 7 days | Modes they wish to use more | Factors mode choice |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| H1 | Nicola | F | 34 | E | degree | yes | f/t | 1 | 50-75k | 2 | 7;4 | no | 1,0,3 | car, Underground, foot | bicycle, Barclays Cycle Hire, foot | necessity (added by herself), convenience, distance to be travelled, speed, environmental impact of transport mode |
| H2 | Monica | F | 41 | Car | degree | no | mat | 1 | 10-20k | 2 | 9;2 | no | 1,0,0 | car | foot | distance to be travelled, convenience, weather, speed, flexibility |
| H3 | Janet | F | 31 | Afr-Car | degree | no | none | 1 | 10-20k | 2 | 5;5 | no | 1,0,0 | car, foot, bus | car/van | convenience, weather, cost, flexibility, time available |
| H4 | Rachel | F | 25-34 | E | 1-4 O-levels | no | none | 1 | < 10k | 2 | 7;5 | yes, child | 1,0,0 | car | car, bike, Barclays cycle hire, Underground, bus, foot | time available, distance to be travelled, weather, speed, cost |
| **Partner households** | **Name** | **Sex** | **Age** | **Ethnicity** | **Edu** | **Work** | **F/t or p/t** | **Adults** | **Hh income** | **Children** | **Ages** | **Mob imp** | **No of cars, motorcycles, bicycles** | **Main modes used in last 7 days** | **Modes they wish to use more** | **Factors mode choice** |
| H5 | Vanessa | F | 35-44 | E | degree | no | vol | 2 | 150k plus | 2 | 7; 5 | no | 2,0,0 | car, foot, mixed | none | convenience, distance of travel, time, weather, distance to pt |
| H6 | Tina | F | 37 | E | nvq l 2 | no | none | 2 | 150k plus | 2 | 8;5 | no | 2,0,4 | foot (but hols) | bicycle | distance to travel, weather, speed, time |
| H7 | Frances | F | 38 | E | degree | no | none | 2 | 50-75k | 2 | 5;1 | no | 1/2,0,0 (often also car borrowed from her parents in law) | car, foot | didn't answer | weather, time available |
| H8 | Debra | F | 38 | E | degree | yes | f/t | 2 | 35-50k | 1 | 5 | no | 2,0,1 | car | foot | convenience, weather, distance to be travelled, flexibility, time available |
| H9 | Emma | F | 38 | E | degree | no | none | 2 | 150k plus | 3 | 5;3;3 | no | 1,0,5 | car | didn't answer | convenience, safety, distance to be travelled, time available, enjoyment |
| H10 | Adam | M | 40 | E | degree | yes | f/t | 2 | 75-100k | 2 | 9;4 | no | 1,0,4 | rail, Underground (but hols) | London Underground, bus, foot | distance to be travelled, convenience, weather, speed, distance to pt |
| H11 | Helen | F | 41 | Car | degree | yes | f/t | 2 | didn't say | 2 | 7;4 | no | 1,0,2 | foot, Overground, Underground, bicycle (but holidays) | London Overground, foot | convenience, cost, safety, distance to be travelled, speed |
| H12 | Laura | F | 41 | E | 5+ O-Levels | yes | p/t | 2 | 150k plus | 2 | 11;8 | no | 2,0,3 | car | didn't answer | time available, felxibility, speed, health benefits, convenience |
| H13 | Bill | M | 41 | E | degree | yes | f/t | 2 | 20-35k | 2 | 6;3 | no | 0/borrow car,0,7 | bicycle, foot | car sharing | convenience, weather, environmental impact of transport mode, speed, my child(ren)'s preferences for transport modes |
| H14 | Gail | F | 41 | E | degree | yes | p/t | 2 | 150k plus | 2 | 5;3 | no | 1,0,5 | car, bicycle, foot (but holidays) | bicycle | speed, convenience, weather, flexibility, health benefits |
| H15 | Carl | M | 45-54 | E | degree | yes | f/t | 2 | 75-100k | 2 | 9;6 | no | 1,0,5 | foot, Underground | didn't answer | distance to be travelled, distance to pt, convenience, weather, speed |
| H16 | Karen | F | 38 | E | degree | yes | p/t | 2 | 50-75k | 2 | 5;3 | no | 1,0,4 | foot, car, Underground | didn't answer | distance to be travelled, flexibility, convenience, time available, weather |
| H17 | Zoe | F | 45 | E | degree | no | none | 2 | 75-100k | 2 | 13;11 | yes, child | 1,0,2 | car | London Underground, bus, foot | convenience, time, flexibility, cost, distance to travel |
| H18 | Sandra | F | 43 | E | degree | yes | p/t | 2 | didn't say | 3 | 9;7;2 | no | 2,0,5 | car, Underground, foot | didn't answer | safety, distance to be travelled, speed, weather, health benefits |
| H19 | Paula | F | 35-44 | E | degree | no | none | 2 | 20-35k | 2 | 3;2 | no | 1,0,1 | car | didn't answer | convenience, flexibility, distance to be travelled, time available, speed |

# Appendix 5

# Accessibility of amenities from home locations

In order to roughly categorise interviewees' home locations and estimate the level of access to main amenities, some accessibility indicators were applied. This was done in order to identify whether it was in principle practically possible for family members to use other transport modes than a car to get around. As this was a qualitative study, a rough indication of the level of accessibility of the families' home location was sufficient, as the focus was on the wide variety of different factors influencing families' travel behaviour.

Inspired by the very broad definition of accessibility (among other definitions of accessibility) noted in a review of accessibility indicators used in planning (Curl, Nelson, and Anable, 2011:1), accessibility for this study was defined as "the ability of people to access destinations", which is an origin, rather than destination based definition.

Accessibility was considered 'very high' when a family lived in walking distance (up to 15 minutes' walk) of a train or Underground line into Central London, a high street and a primary school. If any of the variables were slightly changed, it was considered as still 'fairly high' accessibility, moving to 'fairly low' and 'very low' accessibility with amenities located further away and not in walking distance. Walking times were taken from Google Maps, and do not consider delays when walking with children.

Most families interviewed lived in within 15 minutes walking distance to a railway or Underground line leading into central London, several bus routes, and the nearest primary school. As mentioned previously in this study, the Aldersbrook neighbourhood is less accessible. Although the nearest primary school is within walking distance for all residents, the two nearest high streets and the nearest train station are a ten-minute bus ride away. Apart from the four families living in Aldersbrook, there were also three families who lived in other, even less accessible areas outside the study area, but had children at the primary schools that took part in the study.

There was only one family in the sample who had very low accessibility. Six families had a fairly low accessibility. All families living in areas of low or fairly low accessibility were still in walking distance to their nearest primary school. Therefore, just over half (i.e. eleven) of the interviewed families lived in locations with very or fairly high accessibility and just under half (i.e. eight) in locations with fairly or very low accessibility. However, the analysis of the interviews revealed that what families with children actually consider accessible, might involve much shorter distances, which can directly lead to increased car use.

## Appendix 6

## Short profiles of all interviewed families

*Note: Where only one name is given, the parent is a single parent. Where two names are given, they are partners living in the same household, and both were interviewed. Where one name and 'and partner' are stated, the partner live together, however only one (named partner) was interviewed.*

**H1: Nicola**

Nicola is a single mother living with her two children (7 and 4 years old) just outside the study area. As Nicola didn't like the local schools, she sent her children to a faith school in the study area, which is a forty-minute walk away from her home. Nicola works full-time in Central London. She takes public transport to work. Nicola would like to walk and cycle more, also for environmental reasons, however, her school choice means that this is hardly possible. In order to make it in time to everything, Nicola drives her older child to a breakfast club near school at 7:30am and then back into their home neighbourhood where she drops off her younger child at nursery. The older child will be picked up by the after-school club connected to her sibling's nursery, and their father picks up both children from this place and drives them back home in the evening. Cycling or taking the bus wouldn't be feasible in order to make it in time, also because are usually tired at the end of the day. After Nicola now (after suffering from severe stress induced illness) drastically reduced her working hours to fifteen hours a week, Nicola drives even more. She has more time, e.g. for cycling or taking public transport with the children in the morning, which she sometimes does, however, again, to due to her initial school choice, it is easiest for Nicola to drive everywhere. The other reason for driving is that Nicola wants to reduce stress wherever possible, which for her can be achieved by driving.

**H2: Monica**

Monica is a single parent with two children (9 and 2 years old), living just outside the study area. She chose a state primary school in the study area for her older child as she didn't like her nearest school. Monica is currently unemployed. A local

childminder drives her older child, together with other children, to and from school on most days. Monica doesn't drive much, apart from trips to the local town centre a few times a week. She has a local high street in walking distance but would only walk there, with her younger child in the buggy, on good weather days. Monica says she could live without a car and save money but loves the flexibility her car gives her. She also shares her car with her partner and sometimes lends it to her parents, which is another reason for Monica not to give it up.

**H3: Janet**

Janet is a single mother of twins who are 5 years old. She chose a faith school which however is located in 45 minutes' walking distance. Janet drives her children to and from school. She only recently got her driving licence, i.e. she used to walk, take public transport and sometimes take a taxi, everywhere. However, since she's had the twins, having a car has become more attractive. While she still likes public transport and the freedom it gave her, is aware of the negative environmental impacts of car use, as well as experiences regular break downs of her car, she now uses her car for most journeys. This way she also can accommodate a wide variety of after-school activities for her children, as well as serve her community by giving lifts to family members and others. Despite being interested in physical activity (especially for her children, e.g. cycling), Janet mostly drives, which is primarily dictated by her initial choice of school at great distance from home.

**H4: Rachel**

Rachel is a single mother with two children (6 and 4 years old). Her younger child has a mobility impairment and needs to use a wheelchair. Rachel lives outside the study area, however as she has only just moved there, her older child is still at her old school in the study area (at the time of the second interview, Rachel had moved her child to their nearest school, a two-minute walk from their home). Rachel works as a volunteer, as she has to be very flexible to be able to pick up her younger child from special school in case of an emergency, as well as be there for him in periods of recovery from one of his regular surgeries. Rachel still sometimes walks or takes public transport, even with her son, however, she mainly drives. She drives large

amounts, as she drives her older child to and from school, and to an after-school activities every day.

**H5: Vanessa and partner**

Vanessa and her partner live with their two children (7 and 6 years old) in the study area. Vanessa's partner works long hours in the City of London and travels there by Underground. Vanessa works as a volunteer two days a week, within school hours. Vanessa loves walking and walks the children to and from school every day (a thirteen-minute walk). Each child has four after-school activities, which are mostly at their school or at another school in walking distance, however, Vanessa still drives to three out of these eight after-school activities. Vanessa tries to do things locally as she doesn't mind walking for example the twenty minutes from school to the local town centre to go to an exercise class. However, for good schools or after-school activities Vanessa would always drive any distance. Vanessa and her partner drive a lot at the weekend, for example to parks in the region or to visit Vanessa's partner in a neighbouring borough.

**H6: Tina and Tom**

Tina and Tom had chosen their local school in five minutes' walking distance, and Tina walked their children (8 and 5 years old at the first interview, and 10 and 7 at the second) to school every day. However, their home location was not very well connected generally and although Tina didn't work outside the home, she drove everywhere else, e.g. for shopping, meeting friends, and exercise. Tina would also have driven to school if it hadn't been such a short walk. Tom cycled or took the Underground to his work in Central London.

Tina and Tom's family's travel behaviour was mainly influenced by relatively simple distance parameters, i.e. that the school was so close that walking was highly likely, and that their neighbourhood was relatively isolated so that most other journeys were most likely done by car. However, it has to be noted that the simple distance parameters which happened to determine the how the family travelled, were originally the result of more complex preferences around school choice and where to buy a house, i.e. Tina might have driven less if she and her husband had decided to

buy a house in a more accessible neighbourhood, or driven even more, if they hadn't chosen their nearest school.

**H7: Frances and partner**

Frances and her partner live with their two children (5 and 1 year old) outside the study area. They didn't choose their nearest school but another one in the study area, which is just about still walkable within 18 minutes. However, Frances and her partner prefer driving everywhere. Frances' partner works in a town centre in outer London and drives to work. He also has his younger child with him every day, who goes to a nursery near his workplace. The nursery had been Frances' choice initially, when Frances still worked in the same town centre. She has since been made redundant, however, wants to keep her child in the same nursery, as she envisages potentially finding work again in the same area. This however means that Frances has to drive two return journeys a day to that nursery, on the days that her partner is travelling for business, which he does frequently.

**H8: Debra and partner**

Debra and her partner live with their child (five years old) in the study area. Debra works full-time in a neighbouring borough and drives to work every day as she uses her car for work, too. Debra's partner works part-time, from home. The couple chose a faith school a thirty-minute walk from their home. Debra takes their child to school by car and picks him up from either the after-school club near school, or from a friend's house, on her way from work. The child has only got three after-school activities, of which two are at school. Debra and her husband both have their own car and drive nearly everywhere. Debra would like to work fewer hours to be able to pick up her son early on some days and walk and take the Underground two stops home, as a treat, however this is currently not possible. Debra rejects the idea of cycling and says 'We are not cyclists'.

**H9: Emma and partner**

Emma and her partner live with their three children (twins, four years old and child six years old) in the study area. The neighbourhood is relatively isolated and while there is a popular primary school in walking distance, Emma preferred a smaller faith school for her children, which is however a 34 minutes' walk from home. Emma's

partner works full-time in Canary Wharf to which he commutes on public transport. Emma is currently unemployed. As her younger children still only go to nursery (next to the older child's school) in the morning, Emma mostly drives to school, i.e. two return journeys a day. Emma is very interested in active travel for herself and her children and has tried to walk and take the bus to school, then jogging back home, or cycling with the children to school, however, as Emma find this is relatively inconvenient with three young children, Emma ends up driving most days.

**H10: Adam and Anita**

Adam and Anita live with their two children (9 and 4 years old) outside the study area. Because they didn't get into their preferred and nearest school and rejected the next nearest schools, their children go to another school, a fifteen-minute walk across greenspace. Sometimes Adam walks the children to school, however, as one of the children typically walks slowly, and because Adam would have to take a bus from school to a train station further out than his usual, Adam usually drives the children to school, then drops the car near Anita's workplace (which is a 10-minute walk from their home) and takes public transport to work. Anita has two jobs, one in Central London and one locally. She usually picks up the children from school. Adam and Anita are always in a rush to meet both family and work commitments, which is compounded by the school not offering after-school clubs. This means that the children have to go to a private after-school club even further away from home, twice a week. To make things even more complicated, the family has an arrangement with a neighbour who, when she is not working (she works irregularly) takes the children to school and vice versa. Adam is stressed and wishes that 'every day was the same', in terms of routines. At the second interview, both children had moved to a new school and Adam and Anita had a regular arrangement with a neighbour to drive the children to school, and had hired a nanny who picked up the children every day, taking the bus home and looking after them until 6pm, which worked much better.

**H11: Helen and partner**

Helen, her husband and their two children (7 and 4 years old) live in a fairly isolated residential location within the study area, with the nearest high street a 25-minute walk away, but their child's school only a ten-minute walk from home. Helen and her

husband both work full-time; Helen works office hours in a neighbouring borough and her husband does freelance work, often in the evenings. Helen has a very busy lifestyle, working in two jobs, helping out her mother with a market stall at the weekend as well as engaging with a number of relatives who all live in neighbouring boroughs in East London.

Helen drives everywhere in her small car as it is useful for her and as she doesn't like going on buses which she feels are cramped and uncomfortable. She loves walking with her children to school, even in the rain, and would like to walk more if she had more time. In practice she often drives to school, continuing on to work afterwards. Although her husband is busy, too, he walks everywhere, even longer distances, as he prefers it to driving or public transport. He cycles, too, and only takes the car if he needs to transport something. Helen won't let her children cycle for everyday journeys out of safety concerns, however her husband sometimes cycles together with their older child.

**H12: Laura and Leonard**

Laura and Leonard and their two children (11 and 8 years old at the first interview, and 13 and 10 at the second) live in walking distance to all transport and amenities including their chosen independent primary school. Laura and Leonard share the task of walking their children to and from school every day. Both intend to walk whenever possible and had taught their children how to keep safe as pedestrians and navigate public transport, as a life skill. However, for good schools and after-school activities they would have always drive if necessary. They did a lot of driving for the children's after-school activities but this decreased significantly when the older child started secondary school in Central London (which he can reach on the Underground by himself) and started to have a choice of excellent after-school activities at this school.

Laura's husband takes the Underground to work in Central London. Laura is the main driver in the household as she drives to work on four days each week. She chooses to work at a school in a neighbouring borough, in order to receive the Inner London allowance on top of her basic salary. Schools in her own borough only pay the lower outer London allowance. Laura could probably take the bus to work, but it takes longer than driving and Laura also wants to be able to pick up her child from primary

school in the afternoon, which she can just about make as she has agreed working hours to start early and finish early, but to make it to school in time she has to drive as it is the fastest option. The family car was cheap to buy but is very inefficient to run.

For this family, space-time constellations are the reason why the family walks to school (due to the short distance, which accidentally resulted from their preference for independent schooling), and why Laura drives to work (the combination of a work place further away and the time pressure to be back in time for school end due to the mismatch of working and school hours, resulting in part from Laura's preference for a higher earning job, i.e. one paying the Inner London allowance).

**H13: Bill and Bianca**

Bill and Bianca live with their two children (6 and 4 years old) in the study area, in a slightly isolated estate, a fifteen-minute bus or cycle ride from the nearest high street. The nearest school was only a two-minute walk from home, however the couple chose a faith school a twenty-minute cycle ride away. The family doesn't own a car. They used to live in inner London without a car and wanted to maintain this environmentally friendly and physically active lifestyle when they moved out to the study area. They also wanted to save money. Bill and Bianca work hard to make their car-free life work. It helps that Bill works from home most of the time and Bianca doesn't work hardly at all at the moment. They cycle everywhere and use equipment such as a bike seat, a bike trailer and a tag along to make it work with the children. They still sometimes drive; they have an arrangement with a neighbour whose car they can borrow when they need it. Bill and Bianca are happy to live without a car, however they also often come to their limits doing so.

**H14: Gail and partner**

Gail and her partner have two children (5 and 3 years old). Gail works on average three hours a week in the evening. She either takes the car or a direct bus to work. Her partner works in the City of London and commutes there on public transport. Gail walks to school and nursery in the morning (a fifteen-minute walk), however picks up her younger child by car around midday and then picks up her older child by car, too, in the afternoon. Her older child has five after-school activities, however, apart from

two all of them are walkable. Gail's mother and her partner's parents live in fifteen minutes' driving distance and Gail and her family always drive to see them. Gail is interested in walking and cycling more for exercise, but doesn't think it's practical with her children, as they are still very young. In any case she would only walk or cycle in good weather.

**H15: Carl and partner**

Carl and his partner live in the centre of the study area, a minute's walk from their children's (9 and 6 years old) school. Although the children have many after-school activities each, the family doesn't drive much to these as most of them take place either at school or nearby. Carl commutes to Central London on public transport, and sometimes even cycles. Due to the nature of his partner's job, she drives to ever changing, inaccessible outer London locations, on the three days that she works. The family tries to use public transport as much as possible, however they wouldn't give up the car as firstly, Carl's partner needs it for work, secondly the family needs it to go on camping holidays and thirdly they want to be able to accommodate changing needs such as when the children suddenly started to go to scout camps, which Carl and his partner have to drive them to.

**H16: Karen and Kurt**

Karen and Kurt live with their two children (5 and 3 years old) in the study area, a minute's walk from their children's school. Karen and Kurt were happy to choose the school as they though it was good enough and conveniently located. Karen works three days a week in a neighbouring borough and drives to work. The bus to her workplace takes too long and although she wouldn't mind cycling to work, she doesn't do so as she is scared to cycle on the bit of main road which is part of the journey. Karen still has to leave far earlier than necessary in the morning and go on rat runs to beat rush hour traffic, and to get her preferred parking space at work. Kurt works as a freelancer, i.e. travels to different locations at different times for each job. He uses public transport to work. The children only have ballet lessons and while Karen walks there with one child on a Saturday (a twenty-minute walk), she drives her other child there and back after school on a week day, in order to be home for dinner

on time. Karen and Kurt have struggled to make cycling as a family at the weekend work but have given up as they couldn't find a practical cycle rack for their car.

**H17: Zoe and partner**

Zoe lives with her partner and two children (13 and 11 years old) centrally in the study area. Her younger child doesn't go to the nearest school, but to a faith school much further away. The older child attends a local secondary school to which he takes the bus. The younger child is mobility impaired and Zoe drives him to school every day. Zoe sometimes brings or picks up her older children to and from school. Zoe also drives within the study area to visit her sister or go to an exercise class. All the children's after-school activities take place at their respective schools, apart from swimming, which is a five-mile journey by car. Zoe would like to go more on public transport, e.g. with her younger son, however, as he has a mobility impairment such journeys are strenuous. This is due to Zoe's son tiring easily, and Zoe having to carry any of her son's bags as well as her own, both of which also make it difficult to do any errands on the way. Zoe also fears having to wait at bus stops, especially in bad weather. For Zoe, using the car to minimise the stresses around getting things done in the morning and after school, is key to preserve her mental health.

**H18: Sandra and Sam**

Sandra and Sam live with their three children (10, 8 and 3 years old) in the centre of the study area, a 10 minutes' walk from their children's school and even closer to the high street. Sam cycles to work in Central London most of the days, although her might not in bad weather or when he can't fit in the cycling plus a shower and change afterwards. Sandra is currently unemployed and travels most with the children. She walks the children to school every morning, however, picks them up by car, as they travel on to one (or several) after-school activities. The children have each around eight after-school activities a week, of which Sandra drives to five or six by car. Wherever possible, the children have their after-school activity at the same place and time. As they all do a lot of sports, Sandra and her husband drive the children around at the weekends, too, to competitions, galas, etc. Sandra would like to cycle more, herself and together with the children, but wouldn't do so as she thinks it's too unsafe to cycle. Overall, Sandra and Sam would love to cycle and walk everywhere,

however, infrastructure would have to improve significantly them to be able to reach all their destinations in time and safely.

**H19: Paula and partner**

Paula and her partner live with their two children (2 and 3 years old) outside the study area. Paula doesn't like her neighbourhood at all; they only live there as it was one of the only places in London, they could afford to buy a house in. Paula wasn't willing to send their children to a local school and chose to send them to a faith school in the adjacent, leafier and wealthier study area. This led to Paula often driving several times a day to the study area and back home. Paula couldn't face going on a bus, let alone on a bike with her two demanding children. Paula's partner works long hours in another outer London area, at the other side of town and has a long commute by public transport. Paula finds being a parent very stressful, however, driving gives her a bit of relief and freedom. She anticipates plenty of driving when the children are older and have lots of non-local after-school activities.