

Understanding Transportation Choice of Families with Small Children in Oslo

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Map 4 Sinsenparken day care and surrounding public transportation options

Symbol for Day Care



Symbol for Tram stop



Symbol for Bus stop



Symbol for NSB, train



Symbol for Metro stop



1. Introduction

1.1 Importance of transport mode choice

Transport mode choice matters when it comes to solving major environmental and human health issues. In 2009, the burning of fossil fuels for transport contributed approximately 19 % of total Norwegian green house gas emissions (Miljøstatus i Norge 2011). Moreover, elevated levels of motorized transport in a community can have various negative impacts on the local environment.

Decreased air quality, noise, loss of recreational areas to parking and expanded roads and accidents are examples of these (Næss 2003). More people with more economic resources, coupled with expectations for a certain lifestyle, create additional demands for automobiles, planes, buses, and trains. There appears no end in sight when it comes to increasing energy needs for transport. As access to motorized and personal modes of transportation becomes more common, so will also the demand for energy. Statistics Norway (SSB) reports that in 2009, the number of trips made by Norwegians have tripled since 1965, while the average Norwegian travels four times as far (SSB 2009). One of my goals of this research is to gain more understanding of how we can travel in more sustainable ways.

1.2 Research

The study of transportation habits became of personal interest to me shortly after moving to Norway. Having been raised in a part of the United States where the car is an absolute necessity, witnessing travel habits in Oslo opened my eyes to transport mode choice.

I discovered my research questions one afternoon while riding a bike up to Røa, an area just west of Oslo center. While cycling on a major road leading to the area, I witnessed something happening which did not make total sense to me. On

my left was what appeared to be a well functioning metro, half full and heading west out of the city. On my right was a road, filled with a line of slowly moving cars mostly occupied by only one person. As I travelled uphill, passing one car after another, I started to question why so many chose a mode that creates long traffic queues which they had to sit in. Was there no alternative? After this experience I began observing traffic queues forming throughout the city on a regular basis.

I realized shortly thereafter that conducting research to answer this question would make for a suitable thesis proposal. To narrow the sample set down, I decided to focus on the parents of small children living in the greater Oslo area, a segment of the population which is more likely to have increased demand for fast and reliable transportation.

Transport modes such as the personal automobile can be used as ‘management tools’ (Dowling 2000) for many parents as they attempt to arrive at multiple destinations daily. Exposing children to extracurricular activities outside the day care or school is considered a form of good parenting in modern society (Dowling 2000). Involvement in additional activities, however, increases the need for fast and reliable transportation. While use of the automobile can make it possible for parents to reach activities both for the children and themselves, it could also come at a cost. The choice of the car in order to diversify daily activities of family members can have unintended consequences such as impacting children’s overall physical activity and potential for long term car use (Turbin, Lucas, Mackett, and Paskins 2002).

Before interviewing participants my initial assumption was that this particular group would be locked to using the car. This hypothesis came from my observations and initial reading.

My main research question is:

Why do the parents of small children choose certain modes of transportation?

In order to study why parents travel the way they do, it was first necessary to learn how they travelled. However, this was not my main focus. Instead, I set out to learn more about the reasons people give for choosing one mode of transport over another. In addition, I wanted to look at the concept of 'lock-in' (Sanne 2002, Jackson and Papathanasopoulou 2008) to discover whether or not, due to time constraints, distances, infrastructure, or budget purposes, parents feel that choice does not exist when deciding to use one transport mode over another. Moreover, I would investigate how concern for the natural environment and urban planning influenced travel behavior. Therefore, my sub-questions are the following:

Do parents feel 'locked-in' to using a certain mode of transport?

How likely is it that parents of small children factor the natural environment into their choice of transport?

How does home and day care location influence transport mode choice?

The greater Oslo area has developed in a way that significant distances could exist between where one keeps a home, has their child in day care, and is employed. This triangular travel pattern parents find themselves in is the result of residential location selection (Næss 2009), urban structures (Newman, Kenworthy, and Vintilla 1995) and urban intensity (Newman and Kenworthy 2006). One objective of this research was to discover to what extent distances between personal residences, work and day care, influence transport mode choice. A second objective in terms of urban structure was to gain deeper understanding of the factors influencing residential selection (Næss 2009).

This paper adds to the research already done focusing on mode choice in urban and semi-urban areas. One article that studied the travel habits of parents with small children was written in 1995 by Heidi Kristine Syrdahl Erlandsen. Erlandsen's work, based on a travel habit survey from Oslo and Akershus in 1990-91, looked at work trips taken by non-single citizens between 18 and 55. While this research compared families without children to those with, my focus is solely on the latter. This paper contributes to Erlandsen's study by conducting qualitative interviews and collecting travel diaries from a more focused sample to understand *why* parents travel the way they do.

How people perceive different modes of travel is also touched upon in this paper. Research of this kind has been conducted by various authors around the world (Gardner and Abraham 2007, Stradling, Meadows, and Beatty 2000, Beirão and Sarsfield Cabral 2007, Curtis and Headicar 1997, Steg 2004, Jensen 1999, Guiver 2007). This paper contributes to these works by conducting similar research with participants in Oslo, Norway.

In order to gain insight into the effectiveness of both environmental awareness campaigns and also on policies initiated by the government such as road tolls and taxes on fossil fuels (Tennøy 2010), participants were asked if such campaigns had an influence on them. They were also asked to describe their feelings in terms of 'lock-in' (Sanne 2002, Jackson and Papathanasopoulou 2008) taking into consideration the daily transportation needs, economic constraints, time pressure, etc.

1.3 Methodology

This research is a qualitative study based on 23 semi-structured in-depth interviews, and 17 time-use diaries completed by parents of small children living in Oslo, Bærum, and Ski. In an attempt to interview a diverse set of participants, I chose day cares located in different parts of Oslo/Bærum. Two of the day cares

were selected through contacts I had working at them. They provided me the names and necessary information of the day care and leaders. The third day care, located in Bærum, was selected because it is located next to my current job. Participants were selected using convenience sampling of the three day cares. Additional participants were also found after asking previous interviewees to recommend others for the research, a form of snowball sampling. The interviews lasted between 25 and 50 minutes, were recorded and transcribed.

1.4 Paper's Structure

I will first present the existing literature written on the topic. This literature provides a theoretical context through which one can relate the findings to. Next, I review the methodologies used in data collection and analysis. Ethical considerations and limits of the methods are explained. Chapter 4 is divided into two parts. The first section presents data on how participants in my sample travelled, while the second section looks more specifically at why parents travel the way they do. The discussion compares the results from the field with the relevant literature presented in the literature review. Lastly, I summarize by illustrating what I have found, why it occurs, and what suggestions can be made for policy decisions.

2. Literature review

Existing literature provides the reader different pairs of spectacles through which he can view to better understand certain areas of research. This chapter provides insight into existing theoretical perspectives in order to help make sense of the data gathered during field work. By being introduced to the appropriate literature, one is better equipped to develop a well rounded understanding of the data and in turn the research being done.

This chapter presents relevant literature reviewed prior to and after my field work. Some of these works were concerned with consumption and transport habits. Others looked more specifically at justifications for choosing a transport mode and also certain concepts such as lock-in and urban planning theories. The articles I have studied for this research provide a complete overview of the literature written surrounding the topic. However, those which are discussed in the following pages are ones which relate to reasons for choosing a transport mode.

Different theoretical perspectives on time and transport will be the focus of the first section of the chapter. Various perspectives on time will be presented as this is a common theme in much sociological research. The second section looks at what the terms comfort and ease mean, two terms also used often as a reason for choosing one mode over another. Environmental attitudes and their causes are discussed in the third section, while the concepts of lock-in and freedom are presented in section four. The final two sections, look to literature on the enjoyment of consumption and the impact that urban planning has on transport mode choice.

2.1 Time & Transport

Hupkes (1982), Linder (1970), Røpke (1999), Sheller and Urry (2000), Shove (2003) amongst others, have written about time and its importance in terms of travel behavior.

The following paragraphs introduce different theories on the importance of time and its impact on transport mode choice. These perspectives are: the *time saving paradox* written about by Hupkes and Røpke. *Hot and Cold Spots* written about by Southerton. *Individual versus collective scheduling*, a topic of interest for Shove, Sheller and Urry, and Southerton and *time use and its impact on sustainable consumption* by Reisch.

2.1.1 Time saving paradox

One aspect of time and transport is on time savings and the modern devices which are perceived to assist in making one's daily travels as time efficient as possible. A brief and not so in depth analysis of the situation has certain groups of society agreeing with the status quo, that a car and other convenience devices will simply decrease the amount of time one uses on travel and other necessary daily tasks. However, research done by scholars such as Inge Røpke and Geurt Hupkes challenge this viewpoint.

The law of constant travel time (Hupkes 1982) and the paradox of time-saving (Røpke 1999) are important theoretical perspectives for this research. In understanding these perspectives one is better equipped to critically analyze reasons given by participants as to why they choose one mode of transport over another. Røpke points out that time saving devices such as the automobile often prove to have little positive effect in terms of time saved, as this is quickly turned into more distance travelled to more activities, jobs, and appointments at farther away places (Røpke 1999).

In an article, Røpke focuses on growth in personal consumption. The author explains a phrase he refers to as “the paradox of time-saving” in relation to labor saving equipment or convenience devices. He points out that the products people consume in order to save time or reduce their labor input, in the end, do not have this impact. Instead, these products can have the adverse affect of creating higher levels of consumption and increased quality. In the end the busyness remains (Røpke 1999: 413).

Røpke’s explanation becomes increasingly relevant for a study of transportation habits as he discusses the car and how it fits into the concept:

The phenomenon is well-known from the spread of the car. The car enables the owner to reduce the time needed for travelling, but it also opens up the possibilities of taking jobs further away from home, buying from shops that are not local, and taking part in new or more leisure activities. When car ownership became widespread, it turned into a condition in economic and political planning decisions, and the conditions of everyday life were changed in ways that made car ownership almost compulsory or at least made life rather inconvenient for people without access to a car. Instead of reducing the time needed for travelling, the car thus contributed to a dramatic increase in the distances travelled. (Røpke 1999: 413)

In other words, while one’s ability to travel at a greater rate of speed has been realized, the distances a person is required to travel has in many instances increased as well. Instead of using the increase in speed to reduce travel times, people have used it to conquer new territory, living further from the city or by enrolling in free time activities only reached by using the car. This phenomenon is also the focus of an article written by Geurt Hupkes in which he not only agrees with the law of constant travel times but tries to offer a reasonable explanation of why this occurs.

The author focuses on two areas, the bio-psychological approach and the utility-optimizing approach (Hupkes 1982: 41). The bio-psychological approach is based on an explanation given by Michon “describing man as a bio psychological unit striving to maintain habitual patterns of behaviour” (Hupkes 1982: 41). Hupkes’s analysis of Michon’s work focuses on the idea that man is a creature of

habits, “reinforced by past experiences of pleasure or displeasure, rather than by continuous rational of all available options” (Hupkes 1982: 41). These habits are what influence people to try and stabilize their travel times at a certain length. It is from past experiences of comfort and discomfort that people have recognized the maximum amount time they are willing to travel on a daily basis.

The utility-optimizing approach presented is rooted in economic thinking that man is a utility optimizing creature. Hupkes explains two types of travel utility, one being “intrinsic utility” which focuses on the quality of the travel in itself, and the other being “derived utility”, which explains the benefits which become possible as a result of the travel (Hupkes 1982: 41-42). Both intrinsic and derived utilities increase at first appraisal, however, both reach a point where the utility is maximized and begins to decrease. This happens first to intrinsic utility as the pleasure a person derives simply from movement begins to decrease after a short amount of time. In other words, the travel becomes less enjoyable. This can be a result of boredom or discomfort created by the mode of transport. Derived utility, tends to maximize later when travelers realize that time spent could be used for other activities than travelling. While Hupkes explains that “Neither the bio psychological nor the utility-optimizing explanation make clear why the daily travel times in industrialized nations are at the levels observed in reality” he does identify that “[b]oth suggest why people do try to stabilize their travel time budgets” and that the “two approaches are not contradictory but supplementary” (Hupkes 1982: 44)

Both the paradox of time-saving (Røpke 1999) and the law of constant travel times (Hupkes 1982) point out that faster modes of transport do not necessarily save people time, especially when it comes to daily travel in and around a definite area. What faster modes of transport do allow humans to do is to travel farther while staying within a certain window of time which is acceptable.

2.1.2 Hot and Cold Spots

Another theoretical perspective, this one put forward by Dale Southerton, is that of *hot* and *cold* spots (Southerton 2003). The author describes hot and cold spots as “attempts to gain personal control over the temporal rhythms of daily life” in which people bundle activities and practices into limited and specific time frames in order to leave other periods of time open for rest and relaxation. (Southerton 2003: 20). The tendency to form hot and cold spots creates feelings of “harriedness, characterized as anxiety over whether tasks would be completed within designated time frames and the creation of haste to keep within personal schedules” (Southerton 2003: 9). In presenting his work, I will stress the importance of the concepts of harriedness and convenience devices.

Cold spots are described as “relatively long durations of time devoted to interaction with significant others” while a hot spot is “characterized by a compression of tasks into specified time frames so that ‘time’ was ‘saved’ for more ‘meaningful’ social activities” (Southerton 2003: 19). Hot spots commonly refer to the period of the day which proceeds meal and school time, a period of the day which is predictable. They also generate the perceived need for the opposite experience of cold spots, which are needed to show care to loved ones and to be used as a time to relax, rest, and spend quality time with family (Southerton 2003: 19). Hot and cold spots are important to consider when looking at the concept of time because of the influence they can have on how one experiences it. The research suggests that hot and cold spots are metaphors for the tensions between care and convenience, or concerns about maintaining social standards and personal integrity (Southerton 2003: 21).

It is important to distinguish the concept of “harried” from that of “time squeeze”; where one is constantly pressed for time. Harriedness, particularly in its modern day existence, after the publication of Staffan Linder’s book *The Harried Leisure Class* from 1970, is associated with the verb to hurry or to harass (Southerton 2003: 8). Harriedness is described as “anxiety over whether

tasks would be completed within designated time frames and the creation of haste to keep within personal schedules.” (Southerton 2003: 9) and is an important concept in order to understand the theory of hot and cold spots. According to Southerton, humans have a tendency to schedule daily activities into hot and cold spots in order to deal with feelings of harriedness.

In keeping with the results of Southerton’s research, hot and cold spots are originally formed in order to alleviate senses of harriedness. However, while scheduling practices in this way does tend to separate feelings of stress from feelings of relaxation, this type of scheduling can also have the opposite effect, of increasing feelings of harriedness. This happens in the time periods that Southerton refers to as hot spots. Southerton describes it this way: “Feelings of harriedness and worries of accomplishing tasks within certain time frames are the result of a density of practices and network coordination that are experienced as ‘hot spots’ in the temporal order” (Southerton 2003: 19).

Modern day convenience devices such as washing machines, freezers, and cars, were shown by Southerton to be essential in achieving tasks in the hot spot and in turn enabling the creation of the desired cold spots. Elizabeth Shove describes “gadgets of convenience” as having an unintended consequence of making people’s lives more complicated. Convenience devices have “changed the relationship between individual and collective modes of co-ordination and it is this that turns the screw” (Shove 2003: 182). While Shove admits it is not correct to assume fully that “more gadgets generate more rush”, she does put forward the idea that gadgets do in fact impact the scheduling practices of their users: “(...) tools of convenience have escalatory consequences not just for the fragmentation and co-ordination of time but for the redefinition of convention, obligation and normal practice” (Shove 2003: 182). Convenience devices are not only used in an effort to save time, but they are also used in order to accomplish certain tasks. The completion of these tasks happens within the defined hot spot, enabling the creation of a cold spot, a time to care for loved ones.

2.1.3 Individual vs. Collective time tables

Literature focusing on schedules and time tabling provides another interesting perspective to a study of time and its relation to transport mode choice.

Individualistic time tabling as opposed to a more communal scheduling “forces people to juggle tiny fragments of time so as to deal with the temporal and spatial constraints that it itself generates” (Sheller and Urry 2000: 744). Individualized schedules, generated with help from the automobile and the intense flexibility it provides, create challenges in the coordination of social interaction in daily life. Southerton describes in his research that “more individuals sought to impose personal schedules on collective temporal rhythms” (Southerton 2003: 9).

Shove (2003) illustrates in her description of scheduling that the increase in use of convenience devices leads to more personal scheduling and in turn more complex co-ordination with others who also individualize their schedules. As the complexity of schedules increases, so too does the need for convenience devices. This use of convenience devices, which increases the level of independence in scheduling, has the effect of making schedules even *more* complex. Shove points out that the actions people take for “keeping on top of things” and “holding it all together” actually increase the problem of co-ordination in a society.

In explaining a concept written about by Sheller and Urry, Shove illustrates the impact that cars can have on scheduling practices.

Cars generally enhance the driver’s capacity to determine a trajectory through space and time. Drivers can leave and arrive more or less when they want, they have no connections to miss and can travel along routes of their own choosing, stopping en route more or less where and for as long as they want (Shove 2003: 176).

This description shows that the use of a convenience device, in this case the car, enables one to choose when and where to drive. By comparison, those who depend on public transportation are constrained by timetables that are not of their own making.

Cars have a tendency not only to free their users from collective forms of time tabling, but they also make their users dependent on individualistic scheduling. This occurs because the more one's life is structured around ready access to the car; the more difficult it becomes to reverse this pattern. Car users become dependent on this device in order to accomplish daily scheduled tasks. Shove describes this phenomenon by referring to earlier research performed together with Southerton. "(...) cars, have the 'unintended consequence of tying people into an ever denser network of inter-dependent, perhaps even dependent, relationships with the very things designed to free them from just such obligations' " (Shove 2003: 178).

2.1.4 Time use and sustainable consumption

A look at time and its impact on sustainable consumption is taken up by Lucia Reisch (2001). The author explains in her article the importance time has and will continue to have on efforts to achieve increased levels of sustainable consumption. Reisch presents time in the context of mainstream economic theory and discusses the implications of the "time is money approach and the development of the non-stop society" (Reisch 2001: 370). She also argues for "new models of wealth, which, among other features, call for a new balance between 'wealth in time' and 'wealth in goods'" (Reisch 2001: 369) – two concepts often seen as contradictory to each other. The following paragraphs examine the article in more detail.

A main criticism Reisch puts forward towards mainstream economics is the lack of focus and consideration given to the concept of time:

Mainstream economics is deeply embedded in modernity's vision of material progress and growth. If 'time' is considered at all, it is perceived as an 'input factor' or as a constraint – but not as having intrinsic value per se or as a genuine aspect of personal well-being or national welfare (Reisch 2001: 369-370).

This lack of consideration for time is one variable which has led to the development of a “non-stop society” where wealth is measured not in quality time spent with family and friends but rather in one’s ability to achieve higher levels of material wealth. In this type of environment, sustainable levels of consumption are difficult, if not impossible, to achieve as the “time is money” approach forces consumers to adopt unsustainable lifestyles (Reisch 2001: 374). According to Reisch, more value must be placed on the “Wealth in time” approach where the goal is to “have enough time at the right time and feel comfortable with one’s time frames and institutions” in order for gains in sustainable consumption to be realized (Reisch 2003: 69). Moreover, the author makes it clear that “wealth in time” will not be achieved through the purchase and use of what Shove describes as “convenience devices” (Shove 2003) – devices such as cars, washing machines and answering phones, seen as time saving devices in the eyes of consumers. Reisch, argues that a convenience device, such as the car, will make the user no more wealthy in terms of time, allowing them to travel more distance between the work place, activities, and other commitments. In turn keeping the user not wealthier in terms of time and yet using additional resources to fuel the device.

These perspectives on time and transport show that a consumer who chooses to use the automobile as the source of transport does not necessarily increase their free time. Instead, convenience devices such as the automobile have the potential to leave their users with feelings of hurriedness as the time saved by faster travel is invested in additional activities and great distances. This in turn depletes ‘wealth in time’ which is necessary for people to consume in more sustainable ways.

2.2 Comfort & Ease

Crowley (1999), Cooper (1982), Chappells and Shove (2005), and Wilhite et al. (1996), amongst others, have investigated the concepts of comfort and ease and how they factor into daily practices. As many of these authors have identified, the human demand for comfort, and the providers' supply of it, are factors which have led to unsustainable standards of living, particularly in the global north. Perceptions of comfort, however, are varied and thought of by some to be socially constructed depending on circumstance (Chappells and Shove (2005), Cooper (1982), Crowley (1999)).

Definitions of comfort have evolved during the past few centuries. John Crowley explains that before the word comfort was used to describe a physical condition, it was used in a different sense: "For centuries, 'comfort' had primarily meant moral, emotional, spiritual, and political support in difficult circumstances" (Crowley 1999: 751). To experience a sense of "discomfort" was to experience feelings of "sorrow, melancholy or gloom, rather than physical irritability" (Crowley 1999: 751). It was not until the mid eighteenth-century that comfort achieved a physical connotation. Physical comfort was an aspect of the Anglo-American culture, and could be described as "self-conscious satisfaction with the relationship between one's body and its immediate physical environment" (Crowley 1999: 751). This change in the meaning of comfort foreshadowed a new consuming culture (Crowley 1999: 750).

During the first half of the eighteenth century, comfort became "a legitimizing motive" for widespread consumption patterns (Crowley 1999: 752). Out of a newly formed definition of the word comfort grew a consumer revolution as prosperity increased in the American colonies. However, just as Crowley illustrates in his article that one's description of comfort told us very little about people's generic needs in the eighteenth century, contrasting concepts of comfort remain in modern times (Crowley (1999), Chappells and Shove (2005), Parkhurst and Parnaby (2008)).

Chappells and Shove (2005) focus more on modern day concepts of the term. Their research, based on interviews with architects and others in the construction industry, highlights the idea that “comfort is a provisional and always precarious social and cultural achievement” arguing that the concept is not understood and experienced equally across cultures and societies (Chappells and Shove 2005: 34). This perception of comfort is repeated in various academic works. Parkhurst and Parnaby explain that concepts of comfort depend on “social norms” focusing on whether or not certain physical experiences are associated more with one social class rather than another, “such as whether being hot or cold confers to low social status, and perceived control over the conditions” (Parkhurst and Parnaby 2008: 357).

The idea that people’s feelings of comfort are socially constructed was the focus of another research project, a cross cultural comparison between energy use patterns in Japanese and Norwegian homes (Wilhite et al. 1996). Comfort factors such as home lighting, heating, and water use were analyzed to investigate differences in the energy use patterns across cultures. Researchers found that the use of certain cultural energy services was not only to achieve levels of physical comfort, but also to “insure against social failure” and to present a “socially appropriate home” (Wilhite et al. 1996: 165).

Many of the reviewed studies focusing on comfort were at the same time concerned with the concept of sustainable patterns of consumption. As made clear in a 2008 editorial, “a lower-carbon society supposes and requires significantly new ways of conceptualizing and realizing conditions of comfort” (Shove et al. 2008: 307). However, as several authors illustrated in their accounts of comfort, standards are “social constructs which reflect the beliefs, values, expectations and aspirations of those who construct them” (Cooper 1982: 270 in Chappells and Shove 2005: 32). This literature highlights that having an influence on the way people perceive and experience comfort proves to be a challenging task.

In terms of the implications for transport mode choice, the literature suggests that humans want to feel physically comfortable in the mode they choose to travel with. Although it would be a difficult task to create a universal definition of what comfort and ease mean, this literature suggests that it is an important factor in deciding how one will choose a transport mode.

2.3 Environment, Values & Materialism

In order to develop greater understanding of how people can be influenced to live in more environmentally sustainable ways, one can look to literature from the discipline of psychology and to studies focusing on values, personal goals and identity (Brown and Ryan (2003), Brown and Kasser (2005), Crompton and Kasser (2009)).

In Brown and Kasser the authors focus on the compatibility between what they term “subjective well-being” (SWB) and “ecologically responsible behaviour” (ERB), and the factors that might promote both (Brown and Kasser 2005: 350). The authors investigate whether or not people that identify themselves as happy or for the most part in a state of well-being also act in an ecologically responsible manner. In an attempt to develop an understanding of the correlation between SWB and ERB the authors drew from three “person-level factors” that may support the two. These factors were: *personal values* (both intrinsic and extrinsic), *mindfulness*, and *voluntary simplicity*.

Brown and Kasser define values as “broad psychological constructs with important implications for both motivated behaviour and personal well-being” (Brown and Kasser 2005: 350). Intrinsic values are differentiated from extrinsic by the fact that intrinsic values are “oriented toward personal growth, relationships, and community involvement” while extrinsic values are focused on “financial success, image, and popularity” (Kasser and Ryan 1996 in Brown and Kasser 2005). Results from the Brown and Kasser research showed that people

whose values fell under the intrinsic category were more likely to report SWB and also ERB. The concept of mindfulness, defined as “the state of being attentive to and aware of what is taking place in the present” (Brown and Ryan 2003: 822) also gave insight into whether or not people described themselves as being in a state of well-being or living in an ecologically responsible way. While being attentive and aware of happenings in immediate surroundings could be considered a normal human trait, mindfulness is enhanced or elevated levels of attention and awareness (Brown and Ryan 2003: 822). Brown and Kasser’s results also demonstrated that people who exhibit mindfulness in their behavior were more likely to report higher levels of SWB and ERB than those that did not. Voluntary simplicity, which “involves a conscious shift away from material goals and toward intrinsically satisfying pursuits and the autonomous expression of talents and skills (Dominguez and Robin 1992 and Elgin 1993 in Brown and Kasser 2005: 352) was the third person-level factor presented to help gain understanding of the link between SWB and ERB. While there was evidence which showed that the practice of voluntary simplicity did correlate relatively strongly with ERB, there was less correlation between voluntary simplicity and SWB.

Different research focusing on humans and their environmental attitudes looks not only to values but to identity as a whole. The objective of research conducted by Crompton and Kasser (2009) is to gain a deeper understanding of how best to educate humans so that they act in more environmentally friendly ways. The authors’ goal is to suggest improvements to how environment organizations design environmental campaigns and communications for the general public. The authors stress the need to look to three main aspects of human identity in order to improve the effectiveness of pro environment communications.

A person’s values and life goals are presented as an important factor in the environmental attitudes of humans. The authors quote empirical research which found that people who exhibit self-enhancing and materialistic values are also very likely to express negative attitudes towards non-human nature (Crompton

and Kasser 2009: 9). A suggestion by the authors is that environmental campaigns should not focus on self-enhancing or materialistic values, and instead “frame environmental messages to connect intrinsic values” (Crompton and Kasser 2009: 56). The argument is that people with intrinsically oriented values are more likely to behave in environmentally friendly ways.

The authors also discuss identity in terms of how people associate with groups. This discussion is to highlight the extent to which humans communicate an environmental identity or a sense of belonging to nature (Crompton and Kasser 2009: 11). People who express a connection to non-human nature are less inclined to exhibit materialistic tendency leads to increased resource use and environmental degradation. They identify a third aspect identity as the way humans cope with fears and threats: “There seems little doubt that awareness of the scale of environmental problems that humans confront can lead people to experience a sense of threat” (Crompton and Kasser 2009: 15). When humans are confronted with the environmental impacts of their actions the responses are typically to defend their way of life. Provoking such feelings from humans is not an optimal strategy which should be used by pro environmental campaigns. Instead the goal of these campaigns should be to encourage people to express their fears and anxieties and to activate intrinsic values when people feel threatened by environmental challenges (Crompton and Kasser 2009: 56)

The research conducted by both Crompton and Kasser (2009) and Brown and Kasser (2005) suggests that one must look to aspects of human identity to understand how and why certain people behave in more environmentally friendly ways than others. This research can be applied to better understand how people choose a mode of transport and whether or not concern for the environment is a factor in that decision. The conclusions of these articles propose that it is the values people maintain and their connectedness to non-human natural world that will play a large part in determining whether or not they make environmentally friendly transport decisions.

2.4 Lock-in & Freedom

Røpke (1999), Sanne (2002), and Jackson and Papathanasopoulou (2008) amongst others, have written on the concept of “lock-in”. Lock-in can be described as a state which is a result of structural factors that constrain choices. In other words, an individual is locked-in to making certain consumption choices which are out of one’s control. The concept of freedom and how it is associated with transport mode choice is also presented in this section.

A main focus of the paper written by Sanne (2002) examines the forces behind ever increasing levels of consumption in an attempt to design policies for sustainability. The author is critical of the traditional theory that consumption levels are based on free and individual choice. Sanne argues that multiple external factors exist, which create situations of lock-in. These factors such as the influence of business, the role of the state, and other structural factors, all restrain the consumption choices of individuals. While it appears that individuals are free to choose what and how much they will consume, Sanne argues that in reality, they are locked-in to certain decisions as a necessity in order to partake in society. Structural factors such as urban planning designs, developments in technologies, constant and excessive marketing, and the work and spend life style partially promoted by the state are all factors imbedded in societies which cause citizens to become locked-in to certain patterns of consumption.

An additional perspective on the concept of lock-in is presented by Jackson and Papathanasopoulou (2008). They investigate whether or not continuous growth in material consumption is a result of “the pursuit of ‘luxury’- or whether it is rather a function of institutional and technical ‘lock-in’” (Jackson and Papathanasopoulou 2008: 80). The research compares lock-in theory presented by Røpke (1999), Sanne (2002), and Shove (2003) to other works that focus more on the argument that the pursuit of luxury is the main driver behind increasing levels of consumption. The authors then place these different perspectives in the context of consumption expenditure in the United Kingdom

between 1968 and 2000. They found out that certain unsustainable consumption was a result of the pursuit of luxury. A type of consumption which fell under this category was purchase of recreation and entertainment as well as other services. However, other areas where consumption levels had increased, such as in mobility for commuter and business travel, was not the result of this pursuit of luxury. Rather, mobility consumed for commuter and business travel was found to be driven by institutional forces people had little choice over (Jackson and Papathanasopoulou 2008: 12-13).

As Røpke illustrates, the automobile is a product very commonly associated with the lock-in phenomenon:

Cars do not have their impact as single products, but as components of sociotechnological systems. In the beginning they are introduced as single commodities, but gradually they are integrated in systems of related commodities, infrastructure, social practices and institutions. Such systems gain their own momentum and bring with them lock-in effects as well as technological paradigms in consumption. (Røpke 1999: 415)

The choice of transport mode just as other types of consumption choices is affected by the concept of lock-in. Even where it appears that individuals have the opportunity to choose, in reality, external factors restrict freedom of choice.

Freedom, on the other hand, is defined as “the quality or state of being free” or “the absence of necessity, coercion, or constraint in choice or action” (Merriam Webster Dictionary - Online). Freedom is associated with transport in the fact that certain modes provide their users a sense of freedom. Feelings of freedom are the opposite of feelings of lock-in. A look at both concepts is necessary in understanding the reasons people give for choosing a transport mode.

2.5 Enjoyment

Authors such as Scitovsky (1986), Campbell (1998), Bauman (2001), and Shove (2002) have written on consumer culture and the enjoyment which comes from

partaking in acts of consumption (Guillen-Royo 2007). While these three authors all have different explanations for why humans consume in a certain manner, their theoretical perspectives contribute to an understanding of the enjoyment or satisfaction one derives from these acts.

Scitovsky (1986) and Bauman (2001) both illustrate in their articles the need humans have for diversion and the enjoyment stemming from activities providing stimulation and excitement. A discussion of the “human condition-mortal and miserable” and ones search for “hubbub and bustle” is how Bauman opens his article on consumption (Bauman 2001: 10). The author explains that consumer society is born out of one’s attraction to diversion, which has become in recent years not something that only a few partake in, but rather something that has become socially constructed and “the way of life available to all and the only way of life so commonly available” (Bauman 2001: 12).

Scitovsky’s focus is different from Bauman’s in that he discussed sources of excitement and stimulation, greatly diminished in modern society, particularly in the advanced modern economies of the global north (Scitovsky 1986: 128). These reduced sources of excitement, are a result of the social, economic, and scientific progress which has taken place in certain societies (Scitovsky 1986: 129). While human beings were in the past exposed to levels of excitement and stimulation way beyond what is considered enjoyable, today this is not the case. The stimulation and therefore enjoyment from such activities is what motivates people to seek excitement from other sources. Often times these alternative forms of excitement are sports, gambling, and other types of consumption, including the consumption of mobility (Scitovsky (1986: 131) and Shove (2002: 1)).

Campbell contributes to theoretical perspectives of enjoyment as he explains the idea of a “consumption rhetoric” and how it can “facilitate purchase” or consumption of various goods (Campbell 1998: 236). Within this “consumption rhetoric” he differentiates between two which “accompany everyday consumption practices”, the “rhetoric of need” and the “rhetoric of want”

(Campbell 1998: 236). Both of these are explained by the author through the use of synonyms. Synonyms of the “rhetoric of need” are *requirement* and *necessity*, while synonyms to the “rhetoric of want” are *desire*, *fancy*, and *love* (Campbell 1998: 236). A distinction between the two is further developed as he illustrates the difference between the meaning of satisfaction and pleasure (Campbell 1998: 237). While satisfaction can be provided through the utility which objects possess, pleasure cannot. Pleasure is instead a reaction to stimuli encountered indicating a quality of experience and enjoyment (Campbell 1998: 237).

The reaction of pleasure or enjoyment one experiences from transport is limited and can be short lived. Using an example from the consumption of mobility, both Hupkes (1982) and Reisch (2001) express a theory of diminishing returns when it comes to the enjoyment it provides. An explanation offered by Hupkes focuses on what he refers to as “the utility-optimizing approach” (Hupkes 1982: 41). In this approach the author discusses both the intrinsic and derived utilities one achieves from mobility. Starting out, both the intrinsic and derived utility levels of mobility show positive results as one enjoys the “satisfactions of change of environment, being in the movement, the sensation of speed and freedom, and the excitement of handling a powerful vehicle” (Hupkes 1982: 42). However, after a certain amount of time, both the intrinsic and derived utilities begin to decline as boredom and feeling of discomfort set in as well as the realization that one could be using the time on other activities (Hupkes 1982: 42). Reisch also touches on the issue of enjoyment or pleasure involved in mobility as she describes the experience as “increasingly intermingled with frustration and stress due to overcrowded transport. Solving one bottleneck causing congestion only produces new flow of traffic” (Reisch 2001: 376). The pleasure one derives from the consumption of mobility is at a certain point diminished as time constraints and overcrowding take effect.

2.6 Urban Planning

Urban planning and its impact on the transport habits of citizens is a focus of many researchers. Næss (1995, 2003, 2009), Marchetti (1994), Newman and Kenworthy (2006), Christiansen and Loftsgarden (2011), and others have illustrated how various aspects of urban design such as population density, access to well functioning roads and public transport systems, and home and facility locations can influence transport patterns.

Newman and Kenworthy provide one theoretical perspective of urban planning and the impact it has on energy use from transport. One argument made by the authors is centered around “urban intensity” or what they argue to be a “a minimum level of (...) 35 people and jobs per hectare”. The authors indicate this level of intensity as a threshold where citizens begin to consider taking forms of transport other than the personal automobile, decreasing the total energy use for transport (Newman and Kenworthy 2006: 38). The 35 people and jobs per hectare or 7 dwellings per acre, is the population and work place intensity needed to support public transport. As Næss points out, population density plays an important role in the likelihood that local services are within walking distance or non-motorized proximity to a person’s home or work place. The distance between a person’s home and an urban core, as well as the location of facilities has been shown to have a strong correlation to the average amount of energy used in transport (Næss (1995, 2003) and Newman and Kenworthy (2006)).

Both a historical and modern perspective of city planning is taken up by Marchetti (1994) as he explains how cities maintain certain boundaries. Marchetti argues that the area of a city is determined by the speed at which the available transport can effectively mobilise the citizenry. Marchetti’s work is partially based off of field work completed by Zahavi ((1979) and (1981) in Marchetti (1994)) which concluded that the mean exposure time for individuals is approximately one hour per day. In other words, humans are comfortable commuting for an average of one hour a day. This conclusion is based on

historical reviews of cities dating back to ancient Rome and Persepolis. Because walking was the prime mode of transport at that time, and an average walking speed is 5km/hr, walls of these cities were not seen beyond a radius of 2.5 km an area of approximately 20 km squared (Marchetti 1994). As transport modes changed, a result of technological innovation, cities changed as well. Since the automobile was introduced as a common source of transport, cities have grown upwards of 50 times, due to the speed of the car being 6 or 7 times faster than that of a walking pedestrian (Marchetti 1994: 77). It is this increase in transport mode speed which allows humans to stay within the average 1 hour daily transport, yet cover 6 or 7 times the distance.

Increasing speeds of travel are considered to be one of the main influences causing what is today known as “urban sprawl” (Christiansen and Loftsgarden 2011: 1). Christiansen and Loftsgarden studied urban sprawl in a European context in an attempt to determine the main causes. It is defined as “non optimal areal development or development which could have been realized in a more compact, concentrated, and optimal way” (Christiansen and Loftsgarden 2011: 1). Cities are taking up too much space due to ineffective development. These authors point out, however, that increased speed of transport are not the sole causes of the phenomenon. Three other influences are highlighted, in addition to the transport factor, as having an influence.

Economics is one of these additional influences, particularly the migration to cities from more rural areas in Europe (Christiansen and Loftsgarden 2011: 10). Another factor is at the community level where people, particularly parents of children, feel a desire to move from the urban centers of many cities to areas which provide more green space and safety for their families (Christian and Loftsgarden 2011: 15). The third additional factor presented is political leadership and the way in which regulations are set to either promote or hinder expansion of cities from their urban core (Christian and Loftsgarden 2011: 20). While it is difficult to say which one of these factors is most influential in causing the outward expansion of cities, it is safe to assume that the factors do

not work independently, and that a mixture is the main cause of outward expansion.

The study of transport habits results in multi-layered and complex research which highlights a number of factors contributing to the decision made in the end by consumers. As Newman and Kenworthy point out, “many discussions have tried to explain transport in non-land use terms, however, the data suggest that the physical layout of a city does have a fundamental impact on movement patterns” (Newman and Kenworthy 2006: 42). This is an argument repeated by scholars in the fields of urban planning and urban geography. It is essential to consider the structural constraints of the city to gain a full understanding of why people travel the way they do, as this might be contributing to locking people into the use of certain transport modes.

3. Methodology

This chapter focuses on the methods used throughout the research process. It begins by discussing the benefits and limitations to qualitative research methods before moving onto background information about the selection of my research site and subjects. Afterwards it shifts into details surrounding the collection of data, what specific qualitative methods were used and how I prepared to use them. Later, my strategies of interpreting the data are discussed. The chapter ends by mentioning ethical considerations taken into account.

3.1 Qualitative Research

Since my intentions were not only to research *how* people travelled, but also to understand *why* certain modes were chosen, using a qualitative approach was a major benefit. Qualitative methods allow for more flexibility in the acquisition of data and are also the most effective for gaining an understanding of the feelings, opinions, and attitudes of the participants one is studying (Bryman 2008).

One reason why qualitative methods are useful in achieving deep understanding of social phenomena is due to the need to be in close contact with participants. Methods such as the in-depth interview allow for certain types of knowledge to be acquired that other methods would not. I conducted semi-structured in-depth interviews with every participant in my sample. These interviews allowed me to speak with participants in a one on one setting and to see my research questions through their eyes (Bryman 2008: 385).

It was in the in-depth interviews that participants could give specific reasons for their choice of transport, and I could fine tune follow up questions in order to gain even more knowledge. I came prepared to each interview with an interview guide and a specific set of questions. Yet, the interview structure was still

flexible as I was not required to ask all questions on the interview guide, instead picking up on items mentioned by the interviewee (Bryman 2008: 438).

Time use diaries, another qualitative method in data gathering, were employed in addition to the semi-structured interview to gain more knowledge about the travel habits of participants. Another reason for using the time use diaries was to perform triangulation on the data, to confirm information provided by participants in the interviews. The use of triangulation increases the validity of the data, resulting in one having greater confidence about what has been collected (Bryman 2008: 379, Jick 1979: 602).

Not only could time use diaries validate much of the information coming from the in-depth interviews, but they could also fill in gaps of information not made perfectly clear during. For example, participants in their diaries provided accurate information regarding the distances and time of each individual trip. Parents were able to note down in detail how many minutes each trip lasted and how many kilometers were travelled. In addition, parents described their experiences. While in the interview participants portray experiences in a more general sense, the diaries allowed them to write about each separately.

Qualitative research is also more likely to have theory emerge from the data instead of setting out to test certain theories already in existence. When using qualitative methods, researchers take an inductive approach to the phenomenon they are studying. I took a bottom up approach for this research. Not setting out strictly to test theories, but rather to discover and develop on my own certain concepts.

Limitations to qualitative methods do exist and are mentioned by most authors who write on the topic (Babbie (1995), Bryman (2008), and Silverman (2010)). One criticism of qualitative methods is that they are too subjective and dependent on the researchers own biases of what he or she thinks is important. Another is that qualitative research is difficult to replicate. Because this type of research is unstructured and up to researchers own judgments of design and process, exact

qualitative projects are difficult to simulate. An inability to generalize the results can also be viewed as a limitation. Because qualitative projects often deal with fewer participants, the ability to generalize the findings across populations can be seen as limited. A final limitation I will mention here is one of time constraints. The process of interviewing combined with the transcribing and an analysis requires many hours and can be cumbersome (Scheyvens and Storey 2003: 58). The more time one gives to each interview leaves less opportunities to explore additional units of research. This is one reason that qualitative studies often have significantly smaller samples than quantitative projects.

3.2 Selection of site and participants

For this research I chose to collect primary data. My reason for doing this was to gain firsthand knowledge of local residents' travel patterns. Earl Babbie discusses the advantage of field research by stating:

Field research offers the advantage of probing social life in its natural habitat. Although some things can be studied adequately in quest or in the lab, others cannot. And direct observation in the field lets you observe subtle communications and other events that might not be anticipated or measured otherwise (Babbie 1995: 283).

A main goal of the selection process was to construct a diverse group of participants who matched a specific demographic. My field research began by observing rush hour traffic queues in and around the Oslo area. I then started reading relevant academic articles to what I would be studying. Through this process I gained an understanding of where a potential gap existed in the research. I had not found many articles or research dealing with the transportation habits of parents with children in a day care and why they chose one mode over another. Therefore, I made my decision to focus on this segment of society.

It was important to me that all people in my sample were at similar points in the family life cycle, in other words parents whose children were between the ages of one to six and in a day care. To find these parents I decided to begin my search in different day cares in and around Oslo. Two different types of sampling were used to find my participants, convenience sampling and snowball sampling. In order to diversify my sample, I made sure to choose day cares located in different areas. All day cares were selected through convenience sampling, which is defined by Alan Bryman as “...one that is simply available to the researcher by virtue of its accessibility” (Bryman 2008: 183). The day cares were all accessible to me due to the friends I had working in two of the three and the proximity of the third to my place of work.

Because participants were living not only in Oslo but in other surrounding municipalities such as Bærum and Ski, I define my research area as Oslo and all surrounding municipalities. This includes Oslo, Bærum, Ski, Oppegård, Lørenskog, Skedsmo, and Asker with a total area of 1,098 km² and a population of 856, 915 in 1998 (Store norske leksikon retrieved 2011). A brief description of the climate of the research area is important due to this being a research of transport mode choice. Winters in the Oslo area can be described as cold, dark and snowy with an average temperature in January of -4,3°C. The summers are characterized as mild with an average temperature in July of 16,4°C (Store norske leksikon 2011). Both the Oslo area and Norway as a whole are known for equality between gender and socio-economic levels.

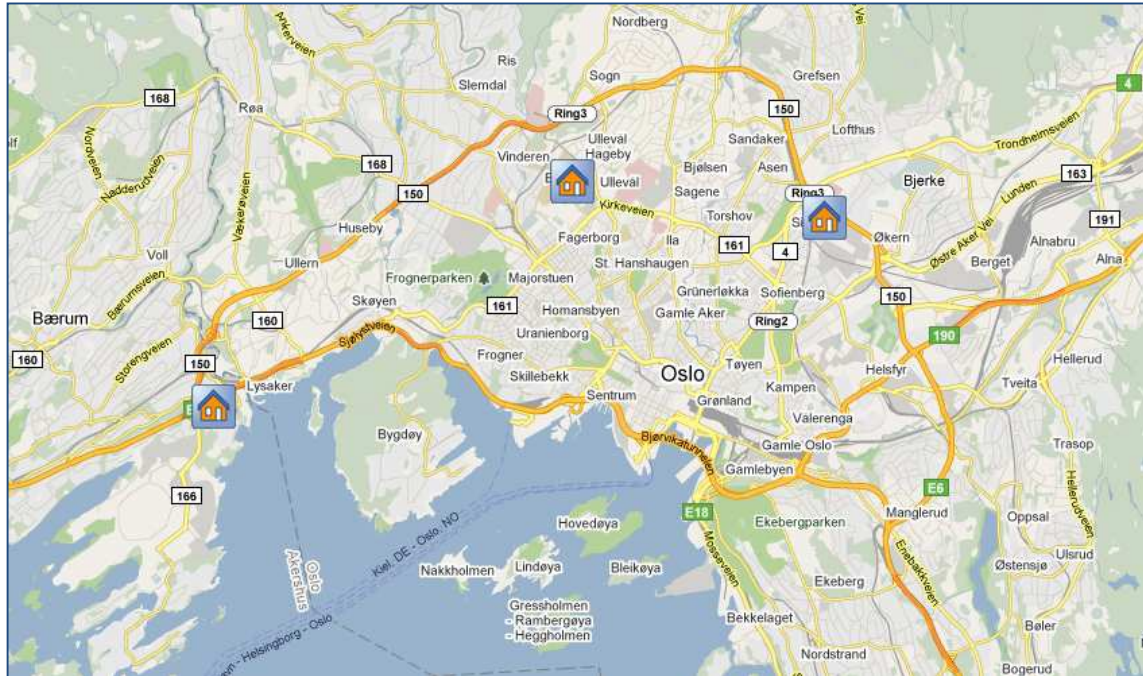
The two contacts I had at the day cares either worked there currently or in the past. These acquaintances of mine first approached the day care leaders on my behalf about the research project. After they had made the initial communication, my first step was to send an introductory email with two letters attached. One letter was intended for the day care leader and the other for parents with children in the day care. In both letters I introduced myself, my research focus, and a few details surrounding participation in the project. In the letter to the day care leader I asked for help in distributing the second letter to parents in an attempt to invite

participants to an interview. The letters were distributed by the day care leaders through email to all parents. Those interested in participating then contacted me by email.

My approach to the third day care was a bit different from the first two, as this was located directly behind my work place in Lysaker and I had no contact working at the day care. I arrived first in person and asked to speak with the director. I met her and presented my two letters. After a brief discussion, she asked that I also send her the letter electronically so that she could distribute them to parents in the same way that the other day care directors did.

Two other participants with children in Bærum day cares also participated in the interviews. These additional participants, as well as a few others with children in the other day cares were found using snowball sampling technique. While not so different from convenience sampling, snowball sampling is explained as finding additional participants through the relevant contacts already participating (Bryman 2008: 184).

I decided to contact day cares in specific locations in order to construct a diverse sample of participants living in specific areas in and around Oslo (Map 1).



Map 1: *General overview of the research area*

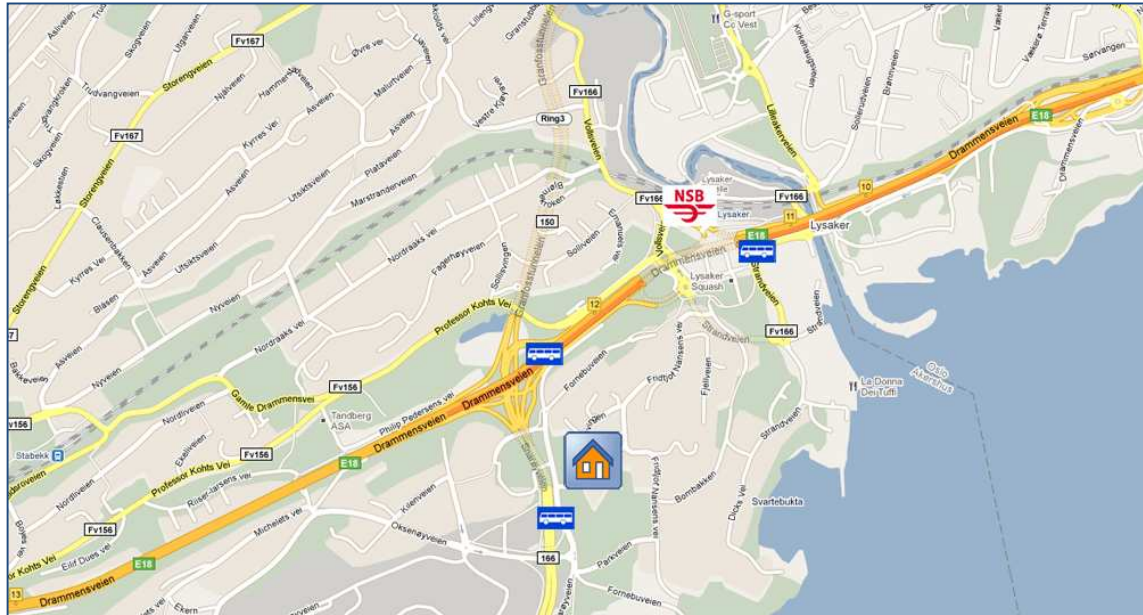
I knew from having lived in Oslo since 2008 that differences did exist between populations living in the separate areas. Day cares located in these areas had various proximities to work and home locations, which became an important factor in the analysis of the data. It was also at this point that I figured I would reach a theoretical saturation point in the collection of data, a point where “new data are no longer illuminating the concept” (Bryman 2008: 542).

The participants in my sample were 24 parents, 46% men and 54% women, who had at least 1 child in day care in the Oslo or Bærum area. Parents ranged in age from 31 to 52 years old, and had between 1 and 3 children. Half of the parents had two children, just over 20% of the parents had three children, and around 30% of the parents had only one child. The average reported household income of participants was approximately 1.1 million NOK, compared to an average in Norway in 2009 of 609 000 NOK (SSB 2011). The highest annual household income reported was 1.8 million NOK while the lowest was 450,000 NOK. There was a significant difference in reported incomes between those who lived in Bærum and those who lived in other areas. The average household income of a

Bærum participant was 1.55 million NOK while the average household income of a participant living in Oslo and other communities was 992,777 NOK. 46% of participants in the sample reported their civil status as married and 50% reported living together with their partner. The remaining participant identified himself as single. Every participant in my sample reported having a job outside of the home.

3.2.1 Day cares

VIER day care (Map 2), located at Lilløyveien 8 in Lysaker, approximately 6 km west from Oslo centre was the first day care I contacted. 54 children between the ages of 1 and 6 go to this day care and the opening hours are from 07:30 to 17:00. There are 17 employees working at the day care. For a child to receive a spot at VIER, parents must apply through the community council. Children with disabilities, children of board members, children of day care employees, siblings of children in the day care receive priority in the application process. Living in Lagåsen and other areas in Bærum also gives priority ahead of others. VIER is serviced by busses 31, 31E, 24, and 28 with a stop located approximately 300 m from the day care entrance. It is also possible to arrive at VIER by taking an NSB train which stops at Lysaker. The train stop is, however, 800 m walking from the day care entrance. There is no metro or tram servicing the day care. Parking for personal automobiles exists directly in front of the building as does the possibility to park a bicycle. Four of the 24 participants had one or more children in VIER day care.



Map 2: *VIER day care and surrounding public transportation options*

The NRK day care (Map 3) located immediately behind the NRK Aktivum at Marienlyst in Oslo, approximately 2.6 km North West from the centre of Oslo, was the second day care I visited. 52 children ages 1 to 6 go to this day care and the opening hours are from 7:45am to 16:45. There are 15 employees who work at the day care. The NRK day care differs from the other two as a requirement for receiving a spot in the day care, is that at least one parent must be employed by NRK. Therefore, children come from all over the greater Oslo area. According to information from the day care director, there are far more applicants than available places. The day care is serviced by bus, tram, and metro, with bus stops approximately 300m away from the day care, tram stops 500m, and metro stops 800m away. There are also multiple parking options for both personal automobiles and bicycles. Approximately half of my sample had one or more children at NRK day care.

As this particular day care is intended only for the children of employees at NRK, the day care is located on the NRK campus next to the office buildings. This creates a different transport reality for these parents. Instead of having to travel all segments between the home, day care, and work place, these parents

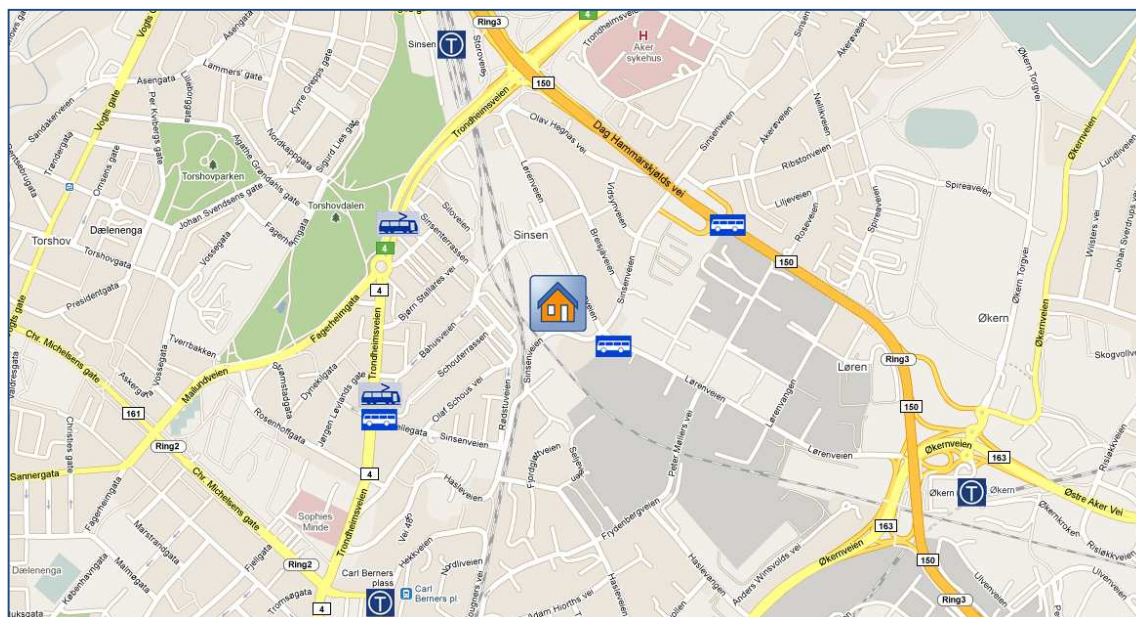
travel only between the home and the work place. I found after the analysis of my data that the location had an impact of the transport habits of participants. When I first set out to design my sample, I was not aware of the impact a work place day care could have on the data. It makes it so that parents have one less leg to travel in the daily commute as they only travel between home and work. Even though this was an unintended factor in the sample, it provided me the opportunity to compare transport habits of parents with a work place day care to those without.



Map 3: NRK day care and surrounding public transportation options

Sinsenparken day care (Map 4) is located at Lørenveien 11 in Oslo, approximately 3.4 km north east from the centre of Oslo. 60 children between the ages of 1 and 6 go to this day care and the opening hours are from 08:30am to 17:00. There are 14 employees and 1 director working at the day care. For a child to receive a spot at Sinsenparken, parents must apply through a community council. Similar to VIER, children with disabilities, children of board members, children of day care employees, and siblings of children in the day care, children living in Sinsen receive priority in the application process. As do children living in other areas in Grüneløkka. The day care is serviced by both tram and bus stops in close proximity. The nearest bus stop is at Sinsen kirke, 50 m from the day

care entrance. The number 17 tram stops approximately 500 m away along Trondheimsveien at Rosenhoff, as does the 31, 321 and 301 buses. There are also multiple metro stops in the area, all between 500 m and 1km away. There is parking available for automobiles directly to the west of the day care and also for bicycles inside the day care gates. Five of the 24 participants had one or more children in Sinsenparken day care.



Map 4: *Sinsenparken day care and surrounding public transportation options*

Possible limitations to this strategy for selecting participants could be whether or not a true representative sample would step forward to take part in the research. The way parents were contacted, with a letter explaining the research questions and motivations could have had an impact on the sample. People agreeing to participate in this way were more likely to be interested in the topic or affected by it in their daily lives. Moreover, perhaps certain ethnic groups were less likely to volunteer than ethnic Norwegians would due to language constraints or cultural difference. These factors could have had an influence on the final data.

3.3 Collection of data

As Bryman points out: “In qualitative research, theory is supposed to be an outcome of an investigation rather than something that precedes it” (Bryman 2008: 369-370). I took a similar bottom up approach to the formulation of my research questions and to the collection of my data. The main objective was not to test a certain theory already in existence in my area of study, but rather to produce theory or concepts of my own which might help make sense of the social phenomenon I studied.

23 semi-structured interviews were completed with a total of 24 parents participating. Interviews happened over a three month period between the middle of October 2010 and the end of January 2011. Interviews lasted anywhere between 25 to 50 minutes, and took place in the location most convenient for the participant, either at their home, office, or day care of their child.

In order to ensure some sort of structure to the interviews, the interview guide was made and used during the conversations. It contained questions and themes to assist me in staying on track during the discussions and to gather appropriate data. All interviews were recorded on a digital recorder and later transcribed in full. Having recorded all interviews I was freed from the need to rigorously take notes. All interviews, with the exception of two, were conducted in Norwegian. I assumed that allowing participants to speak in their native language was beneficial to the research, even if I was not completely fluent myself. During the interviews I tried to stay away from normative and leading questions. All participants were asked roughly the same questions and encouraged to give detailed explanations of their daily and after work hours transport habits.

Participants were also invited to take with and fill out a time use diary after the interview. A total of 22 time use diaries were given to participants and 17 were returned. Diaries were either picked up at the work place of participants or mailed to my home address. The time use diary was structured in a way so that parents were to fill out every trip taken during one normal weekday and one

weekend. Participants were asked to describe where they travelled, how far they travelled in kilometers, the length of the trip in minutes, the mode they chose, and how they experienced the trip. They were also asked to fill in key demographic information at the start of each diary. Parents were encouraged to take the diary with them on the days they were to fill them out.

3.4 Analysis of data

My analysis of the data began towards the middle of the interview process. It was at that point I began noticing certain trends in responses from participants. Before beginning to transcribe, I had an idea of what themes I would look for in the finished transcription. Yet, due to the large amount of data I had collected, I felt that detailed transcriptions were necessary in order to perform a true analysis. The vast majority of transcribing was done after I had completed all interviews. Transcribing of the interviews took three or four times the length of an interview.

Once all interviews were transcribed and all travel diaries were received, I began reading the material. As mentioned, I did have an idea of the themes I was looking for, due to having undertaken a literature review previously. Therefore, I set out trying to locate these themes in each transcription. Initially when starting to read, I had a color coding strategy planned in order to highlight each time one of my themes was mentioned. After moving through a number of the transcriptions, I realized that this was not the most effective way to bring out the relevant data. I found that it was very common for participants to cover multiple themes at the same time. Therefore, my color coding system became difficult to gain information from. I gradually resorted to reading and taking light notes in the columns about important information. After an initial read through of all data collected during field work, I had a more developed sense of what information I was trying to locate. Nonetheless, I felt the need to read through all interviews and travel diaries several times before beginning to draft my results.

I realized quickly that even more analysis needed to be done. It was at this point that I began constructing a large data table where I could enter information given by each participant. Important themes mentioned and specific demographic data was placed into the table for each individual participant. It was after categorizing all of this into an easier to read format that I could compare across the sample and develop an understanding of what it all meant.

Limitations could also be described for the methods used to analyse the data. Because the qualitative approach to analysis is not based solely on numbers, it is suggested that there is a subjective bias in the results. It is up to researcher to pull out and highlight what he or she finds most important. What one researcher thinks is relevant data could be different from others. It is therefore that a common criticism of this approach is the difficulty in replicating the research done and the trouble of making generalizations from the research (Bryman 2008: 391).

3.5 Ethical considerations

In this case, research ethics standards were followed in every way possible. As mentioned, an initial letter was written and sent to the different day cares, providing anyone with interest the opportunity to participate. At the beginning of all interviews, I made it clear to each participant that no names would be mentioned in the paper. The decision to fill out a time use diary was also voluntary.

Before designing my field work questions and strategy I considered the potential benefits and risks to future participants. Because of the nature of my research, I came to the conclusion that participants were at no risk to experience negative consequences from their participation.

4. Presentation of Results

In this chapter I present my data from field work. I begin by introducing what I call the *transport triangle*. I use this concept to distinguish between trips parents take every weekday between home, day care and work, and trips to other destinations.

I continue by clarifying *how* the participants in my sample travelled both *inside* and *outside* of this transport triangle. Transport mode choice is separated into three main categories: car, public transport, and bicycle or walk and is compared across day cares located in distinct areas.

Later in the chapter, data on *why* parents choose a mode of transport will be discussed. Responses are presented in accordance to the frequency they were mentioned by participants. The chapter concludes with a look at whether concern for the natural environment factored into choosing a transport mode. Unlike all the other reasons participants gave for choosing a particular mode of transport, interviewees were specifically asked about the natural environment. Most participants did not mention the environment without being prompted by the researcher. As mentioned in the introduction, one of my research questions was to uncover whether or not concern for the natural environment factored into the transport decisions made by residents.

4.1 How participants travel

Parents of small children usually travel to the day care at least once during a weekday. Because of this, many of my participants were travelling in a triangular pattern between home, work and the day care. This is what I will refer to as the transport triangle, see Figure 1.

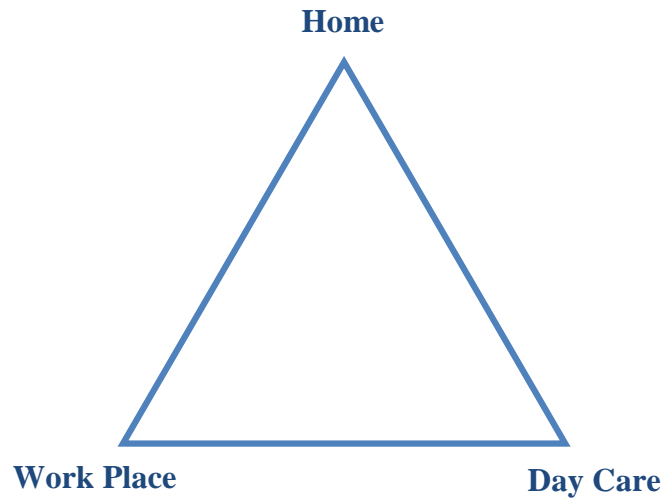


Figure 1: *The Transport Triangle*

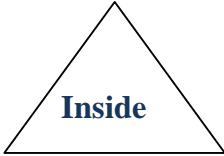
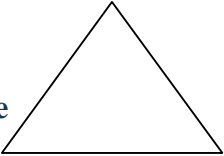
For the purpose of this research, I distinguish between travel *inside* and *outside* of the transport triangle. Parents travelling between their homes, their children's day care, and a work place travel *inside* the transport triangle. Trips that are not between these three locations will be referred to as trips *outside* the transport triangle. These are trips to extracurricular activities such as sport or dance class, travels to the grocery store, weekend excursions, etc.

My original intention was to study trips inside the triangle with the hope to understand better the travel requirements of parents. This is important because one gains knowledge about the impact day care and home locations have on week day transport. During field work I realized that trips made outside of the triangle also play a role in mode choice and that without looking at trips both inside and outside of the triangle, one is unable to conduct a thorough study. Recognizing trips outside the triangle completes the picture of the transport requirements people have to manage.

Focusing on inside the triangle allows one to study individual segments of travel, and to compare those across the sample. For example, one is able to look at the day care location in relation to the home and work place to see how it affects travel choice. As for outside the triangle, one gains knowledge of what choices people make in terms of activities during after work hours. It was made clear during the interviews that the after work hours activities also play a role in the mode choices of participants.

Table 1 provides a general overview of the modes parents with children in the different day cares use to travel both inside and outside the triangle. Each time a parent mentioned a particular transport mode, it was counted once in the table. Because some parents use multiple modes, the totals below are greater than the number of participants.

Table 1: *Travel routines by day cares*

| |  Inside | | |  Outside | | |
|---------------|--|---------------------------|------------------------------|---|---------------------------|------------------------------|
| | Car | Walk & Bicycle | Public Transportation | Car | Walk & Bicycle | Public Transportation |
| Bærum | 6 | 1 | 1 | 6 | 1 | 1 |
| Sinsen | 3 | 4 | 3 | 5 | 4 | 4 |
| NRK | 6 | 7 | 5 | 13 | 5 | 5 |
| Total | 15 | 12 | 8 | 24 | 10 | 10 |

All six Bærum participants reported using the car on at least one leg of the transport triangle. A few of these parents also indicated using an additional mode

inside the triangle. For example, a parent who drives to the day care, parks the car and then takes public transportation to work will be counted twice in the table.

The table shows that the car was the most frequently used mode of transport inside the triangle. This was followed by walking and bicycling and lastly public transportation. For the trips outside the triangle, all participants reported using a car at some point. However, this does not necessarily mean that they own a car or that they drive one. Even participants that did not own a car or possess a driver's license said that they would at times utilize a car.

79% of participants said that the family owned at least one car. Of participants whose children attended a day care in Bærum, 100% reported owning two cars. There were no participants living outside of Bærum who reported ownership of more than one car per family. While a look at the travel data shows there to be greater average distances inside the transport triangle for those people whose children attend a day care in Bærum, car ownership patterns in this area potentially indicate not only an instrumental dimension towards car ownership, but also financial and symbolic ones. The average income of Bærum participants was significantly higher than those living in other areas around Oslo. The ability to purchase and maintain more than one car appeared to be normal for many of these participants, having a potential impact on how they travel. One father (age 31 with 2 children) responded to a question about car ownership in his neighborhood in this way: I: "Do you know any neighbors who don't have a car that are making it work? P: Oh god no, everyone around us has a car, I can't think of anyone who doesn't have a car". This father made it clear in the interview that it was quite uncommon for families living around him to not use the car. When asked further about the number of cars families own, he agreed that the average family living around him has two cars.

4.1.1 Inside the Triangle

This section focuses on trips inside the triangle. Trips between the home and day care will be discussed separately from trips between the day care and work. Table 2 illustrates the mode participants with children in the different day cares use to travel these individual segments in the triangle. Average distances are also provided in accordance with mode and day care. Because each mode can only be used once per segment, the numbers in this table are consistent with the number of participants.

Table 2: *Daily travel routines inside the transport triangle*

| | Home to Day Care | | | | Day Care to Work | | | |
|----------------------|------------------|----------------|---------------|---------------|------------------|----------------|---------------|---------------|
| | Car | Walk & Bicycle | Public trans. | Avg. distance | Car | Walk & Bicycle | Public trans. | Avg. distance |
| Bærum | 5 | 1 | 0 | 2.5 km | 5 | 0 | 1 | 13.5 km |
| Sinsen | 1 | 3 | 0 | 1.1 km | 1 | 1 | 2 | 8 km |
| NRK | 6 | 4 | 2 | 9.0 km | N/A | 2 | N/A | 2 km* |
| Avg. Distance | 7.5 km | 1.1 km | 5.5km | | 12.7 km | 4.6 km | 7.6km | |

An overall look at the data shows the car as the most popular mode chosen on both segments. I found there to be a strong correlation between greater distances travelled and use of the car. Participants who travelled farther were more likely to use the car. The second most common mode of choice was bicycling or walking. Participants who chose this mode travelled on average shorter distances between the locations.

Public transportation was the mode least used by parents inside the triangle. Many participants indicated that the reason they did not use public transportation was due to the necessity of travelling with a child. The majority of public transport users in the sample would use it only when travelling by themselves. This was a common topic of conversation by many car driving parents. A father (age 43 with 2 children) said:

If I was travelling alone I would not have had a problem taking the train (...). I think it might have been relaxing, if it was just me, but when there are more people coming along for the ride and especially when they are children, I believe that it is better with the car...

This father, a car driver who like many other participants said he would most likely choose the car had he not travelled with children, described a common situation that other parents faced as well.

A mother (age 35 with 2 children) expressed the same thought: “If I had the opportunity to drive alone, I would have most likely taken public transport. But it is because of the kids that I take the car.” Parents who responded in this way were car users who envisioned themselves using more public transport or even perhaps bicycling once they were past the point of being responsible for the young ones.

An interesting finding from the data reveals that the only two participants who did not make a daily journey between their home and the day care were both public transportation users inside the triangle. These fathers both had partners, who for various reasons had the main responsibility to drop off and pick up at the day care.

While some participants said that the proximity of their home to the day care and work place was intentional, an equal number claimed that this was a coincidence. Many of the cyclists and walkers made it clear that their decision to transport themselves in this particular manner was an attempt to reduce the complexity of their lives, in other words a decision based on practicality. One participant, a father (age 53 with 1 child) expressed during the interview that he lives and

always has lived close to his work, in an attempt to make his life as simple as possible. He used a Norwegian saying “å gå over bekken etter vannet” [to go over the damn after water] to express his desire not to make things more complicated than necessary. Yet, an equal number of bikers and walkers said that their close proximity to the day care and work place was a coincidence. A similar reality was mentioned by car drivers. When these parents were asked whether they put serious thought into transport when choosing their place of living, around half of the sample said yes and the other half no.

Home to Day Care

Looking specifically at trips between the home and the day care shows that more than half of the participants reported using the personal automobile to make the journey. The average distance a car driver travelled on this segment was 7.5 km. Only one of the car drivers lived closer than 2 km to the day care. Car drivers mentioned multiple reasons for using their cars, one of which was the distance they needed to travel. For these parents taking public transport was not as effective as the car. There were three car drivers who lived more than 20 km from their day care.

Comparing the data across day cares allows one to see the different trends which exist. More than 80 % of participants who had children in a day care in Bærum reported using the car to deliver the child there. This is compared with participants from NRK day care, where just under half of the sample used the car on this segment. From Sinsenparken, 25 % of the participants used the car.

It was not my original intention to study a work place day care and two normal day cares. The fact that NRK is a work place day care had an impact on the data collected. One main finding was that participants travelled on average greater distances to NRK than to the other day cares. NRK had children attending from all over the greater Oslo area. I found that a work place day care has an impact on how families travel. First of all, these families do not travel in a triangular transport pattern. There is no extra stop at the day care for the parents working at

NRK. This type of arrangement had the effect of limiting the amount of time that children spend in the day care, and the parent that delivered was spending more time travelling with their children on weekdays. Because parents were travelling to work with a child, they were rarely travelling alone. This could, the data suggests, impact the way that those parents choose to travel as parents travelling distances of over a few kilometers travelled by car. Every participant from NRK day care who travelled by car had at least 2 children. One of the participants had 3 children.

All car drivers reported access to an alternative form of transport. Participants whose children attended a Bærum day care indicated the bus as an alternative to driving the car. Most of these participants reported the bus service as above average in terms of frequency and coverage. Yet, due to the necessity of making connections, time used, and comfort it was considered an inferior form of transport. Of the six participants from NRK who chose the car between home and the day care, four reported having access to either the metro or bus as an alternative mode of travel. The other two participants, a married couple (both age 43 with 2 children) living in Ski county southeast of Oslo reported the NSB train as the only alternative to using the automobile to travel into Oslo on the daily commute. A car driver participant from Sinsenparken reported having access to a tram which could take her between her home and day care.

Of the participants travelling between their homes and the day care, 36 % of the sample indicated that they either walked or bicycled as the main transport mode. The average distance walkers or cyclists lived from their child's day care was 1.1 km. While no walker lived farther than 1.5 km from their child's day care, cyclists tended to live slightly farther. Almost all participants who chose this mode of transport between the two locations lived inside of Oslo. The only non Oslo resident who travelled this way lived in Bærum. This mother (age 36 with 2 children) lived next door to her child's day care and reported walking between the two locations. From the sample at Sinsenparken, 75 % of the participants walked or cycled between their home and the day care. These parents lived on

average 800 m from the day care. 33 % of the parents from NRK either walked or cycled this distance. These parents lived on average 1.75 km from the day care.

More than half of the participants who walked or bicycled this distance did not have regular access to an automobile. Because these participants lived in such close proximity to the day care, there was no a need for an alternative. For the participants from Sinsenparken, a possible alternative could be the bus, as it stopped right next to the day care. The tram or bus was mentioned as alternatives for parents from NRK.

The data tells us much about the impact of urban planning on transportation choice. One can see this tendency across the day cares. The population density surrounding the day cares appears to have an impact on the transportation modes used. Day cares with a higher population density surrounding them are more likely to have a higher percentage of the attendees being brought on foot or by bicycle. The opposite is true for day cares surrounded by lower density housing. These day cares are usually arrived at by car as the average distances parents are travelling is greater. Although NRK day care has attendees who live all over the great Oslo area, there are also many who lived within 2km, increasing their probability of walking. For Sinsenparken, this proved true as well, with 75% of participants travelling there either by foot or on bike. Participants travelling to Bærum day cares, on the other hand, where the residential intensity is at a much lower level than inside Oslo, were more likely to use the car.

Only 9 % of the total sample reported public transportation as a mode between the home and day care. There were no parents from Bærum or Sinsenparken who travelled by public transportation. Parents who used these options travelled on average 5.5 km. Participants travelling with public transportation were both mothers who had one child attending the NRK day care. One of the mothers (age 36 with 2 children) travelled using a mixture of bus and metro. This mother reported no alternatives as she did not have a driver's license and lived too far to

walk or bicycle between the two locations. The other mother (age 36 with 1 child) used the metro to travel between the two. She said that she could have chosen the bus instead of the metro as the alternative but that she enjoyed the metro, describing it as the premier form of public transportation available. She also mentioned that at this point in her life, with one child, she sees no need to use any other form of transportation. She went on to say that even with more than one child the metro would be a good alternative. However, she expressed a different opinion when talking about the bus and tram.

(...) if I were to have more children, it would be completely impossible for me [to continue travelling the way I do], I just would not be able to do it, it would be a very unpleasant situation if I was going to rely on the bus and tram. (...) If I was going to travel with two children on a tram, maybe I would have taken the car.

A major trend that stuck out from the data is that parents who travelled with children avoided taking the public transport service. They tended, instead, to use modes, such as walking, bicycling or the car which they were in control of in terms of schedules and operation. Even if a participant lived in close proximity to the day care, the tendency was not to take public transportation, but rather walk or bike.

Day Care to Work

The travel data for the journey between the day care to work is limited to Sinsenparken and VIER day cares. As mentioned, the NRK day care is located right next to the work place. Therefore, parents who work at NRK do not have to travel a distance of significance between the two locations. Analysis of the travel between the day care and the work place is then based only on people not employed by NRK and two participants with spouses or partners employed by NRK working in other locations.

Approximately 50 % of participants that travelled between day care and work used the car. The average distance that car driving participants travelled between these two locations was more than twice that of what a public transport, biker, or walker used. Bærum participants were the most likely to use the car on this leg

with 83% of the sample from this area choosing to use the car. At the other end was Sinsenparken participants. Only 25 % of who used the car between day care and work. The average distances that a car driver reported travelling on this segment of the triangle explains why they have to use the car. The alternatives were not a viable option for them, as the amount of additional time they would require was too great.

The distances travelled by walkers and bicyclists varied, with an average of 4.6 km. 25% of the sample walked or chose the bicycle this segment. No Bærum participant chose to walk or cycle this distance, while one from Sinsenparken chose the bicycle and two parents from NRK who worked in other locations biked and walked.

The remaining 25 % reported that they use either the bus or metro as the main mode of transport between the day care and their work place. Two of these participants were mothers. One mother (age 33 with 2 children) travelled approximately 5.5 km between the day care and her work. She reported no alternatives to her choice of travel as there was only one car in the family which her husband used on a daily basis. The other mother (age 39 with 3 children) travelled 15 km between the day care and her work. She did have the possibility to make the journey with one of the two cars available for use in the family, but chose not to. Her reasons were that using the car was more time consuming due to the congestion she had to deal with when travelling in and out of the city at rush hour. This mother also mentioned that she did not like driving in the city. The third participant, a father (age 31 with 1 child) indicated the bicycle as his only alternative to taking the metro between the two locations.

A much larger percentage of the participants chose public transportation on the day care to work segment in the transport triangle than on the home to day care segment. This information coupled with analysis of commentary made by parents during the interviews makes clear a tendency that parents shy away from using

public transport when travelling with children. Parents are more likely to travel on modes that they have control of such as the car, bicycle, or walking.

4.1.2 Outside the Triangle

Travel habits outside of the daily transport triangle were also discussed in the interviews and noted down in the travel diaries. Parents indicated a variety of activities and locations they were travelling to. Examples were to children's sport events, to visit relatives and friends, to buy goods at the store, and to take part in the Norwegian tradition of visiting a cabin outside of the city. The data on how parents reported travelling outside of the transport triangle will be compared to the data on how they travelled in the triangle. Because transport is much more varied during the after work hours and on weekends, the frequency at which parents choose a transport mode for other trips is discussed using 3 categories: *Main mode, regular use, rare use.*

Participants who did not mention using a mode or who said it was of seldom use, were counted under *rare use* for that mode. When a participant said that they travelled with a mode on a somewhat regular basis, combining this mode with others to move around that commentary was counted under *regular use*.

Participants who said they travel primarily with one mode and none other for trips outside of the triangle were counted under *main mode*. These participants did not indicate any other mode they use regularly other than the car. A trend appeared in the data which suggested that people who chose the car tended to stick with that mode, rarely branching out to use the other ones. The opposite was true of other modes, where participants indicated utilizing a mixture transport forms to get around.

All participants mentioned riding in a car outside of the transport triangle. This ranged from people who would occasionally catch a ride with friends and family to those who used the car on a daily basis. Almost all of the parents who

answered that they drive the car as the main mode outside of the transport triangle also indicated that they use the car as their main source of transport on at least one of the segments of the triangle. Moreover, many parents who did not choose the car inside the triangle reported travelling with the car outside the triangle. A father (age 31 with 2 children) who mainly walks to and from work and the day care reported that his family regularly uses the car for other trips. The most common of these trips would be when visiting friends and family not living within walking distance, when purchasing a large amount of food at the grocery store, and also when travelling to the mountains to the family cabin.

Another participant, a mother (age 31 with 1 child) who reported cycling as her main mode of transport in the triangle, said her family drives the car for various activities during the weekends. One of these was to travel to her parent's house on Sundays for dinner. She explained that travelling with other modes was simply not convenient enough for them.

(...) if we are to go there for a Sunday dinner, it is very easy for us to take the bus down to Oslo central station and then take the train out to Lillestrøm. But this way we would use about an hour on public transport, and in addition it costs us a lot more money than if we were to just drive the car from here and out to Lillestrøm in 15 minutes. When we are three people I figure that we are three people in a car and therefore not so damaging on the environment as if one single person had decided to make the same trip with the car.

The situation described above was common across the sample. Not only was the car utilized regularly by parents outside the triangle by parents who also used it regularly inside the triangle, but moreover, the car was driven outside the triangle by parents who chose other modes inside. Parents reported no less need for the car during after work hours. In fact, the data suggests that the car was in more need at these times.

When trips were 1 km or less, participants in the sample reported a higher tendency to walk, whether that was taking the child to the neighbors for a play

date or to a close store to purchase a few needed food items. Bicycles were also ridden occasionally on weekends and at after work hours as a mode of transportation. A father (age 43 with 3 children) who in every other instance indicated the car as the main mode of transport, described in his travel diary cycling with the family 3 km on a Saturday to visit a nearby beach. He also wrote that he rode the bicycle when making a 1 km journey on a Sunday to play tennis with his wife.

When participants were asked to respond to how frequently they either walked or bicycled on trips, the answers differed from those who chose the car. Bikers and walkers tended to use a mixture of modes on other trips. Therefore, these were never reported as main modes. The percentage of participants who said they regularly walk for trips outside of the triangle was around 30%, while the percentage of those who said they rarely walk was 70%. As for the riding of bicycles, 21% of participants said they regularly use the bicycle for making other trips, while 79% reported they rarely did.

A little under half of all participants said they take public transportation regularly outside of the transport triangle. All other parents said they rarely ride on the public transport. No one used this mode as their main and only source of transport outside of the triangle. Although parents did show a tendency to travel on the public transport with children more often outside of the triangle, this did not match the number of parents who claimed to take public transport when alone inside the triangle yet only use the car outside when travelling with the family. Participants as a whole were more likely to use the car outside the triangle than inside.

Participants who reported driving the car on a regular basis were very likely to report only the car as their mode of transport. These participants were more likely to live in areas where the car was needed to buy food at the grocery, to deliver children at extracurricular activities, and visit friends and family. These people said they rarely use any other mode of transport.

On the other hand, Parents who reported one of the non-automobile modes of transport for trips outside the triangle reported a mixture of modes and not just one. For example, almost all parents who reported riding the bicycle regularly also reported a higher frequency of walking and taking public transportation.

4.2 Reasons for choosing a transport mode

This section presents data on *why* parents chose their main mode of transport. The top five most mentioned reasons for choosing a transport mode; time, ease, enjoyment, freedom, and comfort are presented in accordance with the frequency which they were discussed in the interviews (see table 3 below). The explanations given by car drivers are compared and contrasted to answers given by non car drivers. Behavior change due to environmental concern is discussed at the end of the section. Because one objective of the research is to uncover whether or not concern for the natural environment factors into transport mode choice, all participants were asked how this played into their decision.

Table 3: *Justifications for choosing a mode of transport*

| Justification for transport mode choice | % of participants who mentioned this reason |
|--|--|
| Time | 79% |
| Ease | 66% |
| Enjoyment (positive or negative) | 54% |
| Freedom | 45% |
| Comfort | 37% |

4.2.1 Time

When asked why participants chose to travel with a particular mode of transport, 79% of participants mentioned time use as an important part of their decision. Daily time pressures were mentioned by these participants as one of the main reasons why time was such an important factor in transport. The following data examines how participants talked about time as a factor in everyday life. It also shows how participants perceived the impact that a mode of transport can have on time use.

Car driving participant’s perception of time differed from non car users. The car was often described by drivers as a “time saving machine” enabling families to make the day come together. One mother (age 36 with 2 children) described it by saying

One is completely dependent of being on time. It is also not so nice that the children have to be in the day care from 7:30am until 17:00. The car enables me to arrive on time at all of the places I need to reach, allowing for the day to function correctly, so for that reason, everyone, or should I say, we, are dependent on the car.

This mother felt that she was unable to achieve daily tasks without using the car. The amount of distance she was required to travel and the time constraints she was working with made it a necessity.

It appeared after analysis of the data, that car drivers had more complicated lives in terms of time pressure. Many car drivers had a tendency to live in areas where use of a car was necessary in order to arrive on time to daily tasks. Two interesting findings emerged from the data. The first was that car drivers were more likely to discuss time pressures and the need to save time than non car users. The second finding is that car drivers appeared to travel greater distances than non car drivers. A question which must be pondered is whether or not the car driving participants chose their place of living first and then found out that they needed a car, or whether the car came first, allowing them to structure their lives as such?

Participants who used modes of transport other than the automobile also mentioned time use as a reason why they chose the particular mode. When time was mentioned by these participants, it was to explain that they did not feel as though the car would have any time saving impact were they to use it instead of the mode they chose. Instead of seeing their chosen mode of transport as something that saves them time, they described it as something which was comparably as fast as the car. Although some non car drivers did say that driving the car would be slightly faster, they also said that they enjoyed the mode they used, and the extra few minutes were not enough to influence their mode choice. Lack of time was mentioned less frequently in the interviews and travel diaries of those who chose other modes of transport than the car.

When describing “wasted time”, non car users also gave rather different descriptions from car users. Car users described wasted time as time sitting at

public transport stops or having to make all of the stops along a public transport route. Two car driving mothers described taking public transport as similar to being on a “milk route”.

Mother (age 40 with 3 children)

I: What is your opinion in general on the access to public transportation in Oslo, or out on Snarøya?

P: Out here, there is a bus that goes every 10 or 15 minutes, so in that way one can say that the offerings are good. But it is that the bus follows what is similar to a milk route, you do not travel from A to B, instead you have to stop in all the stops in the world on the way...

I: And that takes time?

P: Yes, it takes lots of time, and it is time it comes down to all of the time. And the whole part of standing around and waiting, the bus does not go whenever you are ready. So therefore must you just stand there and wait and then it takes time to travel, and on top of it you have to walk to and from the bus stops.

Mother (age 36 with 1 child)

P: My daughter attends a dancing training in Grünerløkka every Monday, so we have to take the bus over to Torshov and then change over to a tram to get down to Grünerløkka. It feels like we are on a milk route. And it is very difficult and very crowded and I think that almost every other time that we experience that the doors shut on us, so then my daughter begins to cry and gets scared and so on.

Car drivers also said that taking the public transport or travelling any other way took time away from the opportunities they had to be with their family. On the other hand, non car using participants were more likely to describe “wasted time” as time spent in traffic jams or travelling an unnecessary number of kilometers between locations.

Time used in transport was not only reported by participants as a reason why they chose their main mode of transport, but also as a reason why their families had decided to move from Oslo back to where they are from. One of the mothers (age 35 with 2 children) who mentioned her families future move out of Oslo, said that the time required to travel the 25 km between her home, day care, and work place in the city was too much. When asked why her family chose to live such a distance from her work and day care, the mother responded that space and a yard

for her children was very important, and that she and her husband could not afford the space they preferred any closer to the city.

P: It is the only place where we could get a relatively big house with a yard at the price we had money for.

I: So you would rather have a yard and a house, was it a house you said?

P: It is the end of a row house. We are on the end, so we have the yard around us.

I: Yeah, because for some people a yard is very important, while for others the yard is not as important.

P: Yeah, I grew up with a house and a yard, so I feel that it is very important, especially for the children where they have the freedom where they can run out in the yard and play. And not right out in... We lived in Grünerløkka before, and when I became pregnant with the second child, and the first had already grown quite a lot, it became very stressful because I had to constantly keep an eye on them at all times, there was a lot of traffic and people around... I am not a city girl. It all about having it more calm around the family.

A second mother and father (both 31, 1 child) living near the centre of Oslo in Grünerløkka also mentioned their intention to move out of Oslo in the near future. Similar to the other family previously mentioned, this mother and father reported that the time they were using to travel between the home, day care, and work place was simply too much and factored into their decision to move from Oslo to Trondheim. When the mother was asked in the interview why she chose the car as her made mode of transport in the triangle, she responded by saying: "For me it is impossible to use the public transport. If I am going up to the day care and then on to work from there, it will simply be too much time...it would take me 1 hour and 45 minutes one way."

This couple described their inability to place their child in a day care closer to their home in Gruneløkka as the main reason why their transport situation was unmanageable without the car. They said that moving back to their home town of Trondheim would decrease the time they were required to use on transport.

A tendency for parents to move out of central locations after having children was common in my sample. Multiple participants mentioned a willingness to sacrifice a short commute to work and other locations in order for their children to have a

yard to play in and to be brought up amongst other children of the same age in a safe environment.

All participants living in Bærum discussed time use as a main reason why they chose the mode of transport they did. One mother (age 36 with 2 children) mentioned time as the main reason she chose the car. Travelling the 18 km between her home and work place was twice as fast with her own car. She also described feeling less pressure in the afternoon when it came to arriving on time to pick up her daughter at the day care. Another mother (age 36 with 2 children) living in Bærum also described time pressures as the main reason she chose the car:

I: How do you feel the access to public transportation is in this area?

P: Very good! yes.

I: So it is not the reason you and your family don't use it?

P: No, it is delivering our children at the day care. If I am going to try and be at work between 8am and 8:30am, and if I were to use the bus and have to get off at the day care and deliver and then get on the bus again, it would take quite simply too much time.

I: So it's a question of time.

P: It's a question of time, yes. Because the access is there, and I am very happy with public transport, as long as the access is good. So it basically boils down to the amount of time it requires.

In an ideal world this mother said she would gladly use another mode of transport as she was not particularly fond of the levels of car use by parents today.

However, because she lives where she does and is required to travel she explained that she was stuck using the car, at least for the time being.

Participants living inside of Oslo reported a slightly different reality when it came to time and transport. Although time was also mentioned as a factor, these parents were less likely to describe a constant time-squeeze as the reason why they chose a mode of transport. A mother (age 44 with 1 child) who reported bicycling to work the majority of the year, mentioned time and the bicycle in this way: "One benefit of using the bike is that it is the absolute fastest mode I have access to when travelling inside the city" While this mother did mention one reason for choosing the mode was because it was the "absolute fastest", she does

not focus on the fact that the mode of transport she chose is the only mode able to take her on time to various locations inside the triangle. This mother did not express a dependence on the bike to arrive on time. Instead it was talked about as more of a bonus.

Fewer participants talked about time as a crucial factor in the travel they were doing outside of the triangle. Nevertheless, a significant number did discuss the automobile's speed as playing a key role in the transportation to extra-curricular activities. One father (age 44 with 3 children) made it very clear when responding to the question of why he used the car after work hours: "If I didn't use the car I could never reach my kids games being played at 17:30 out in Bærum or way up at Oppegård". This father explained that his children's schedules in the after work hours required use of an automobile. There was simply too much distance to cover. Other parents illustrated a similar situation, where taking a slower form of transport other than the car was not an option. Too much was going on at various times.

4.2.2 Ease

Ease of use was the second most frequently mentioned justification for choosing a mode. This reason was used to describe all modes used. Modes talked about as easy to use were alternatives that parents said required little thought. Moreover, they were options that were flexible in terms of departure times and routes one was travelling.

66% of participants mentioned the ease of using a transport mode as the reason why they chose it. Of the parents who described their modes of transport in this way, nine chose the car, four were metro users, three chose the bicycle, and two were walkers.¹

¹ A father (31, 1 child) and a father (31, 2 children) were counted twice as they described their reason for choosing two different modes of transport as easy. The first father (31, 1 child) described both his walk to

Of the nine parents who described using the car because it was easy, one father (age 33 with 2 children) described the car as much less complicated than the alternatives, especially since he had two small children he had to transport over 7 km each way from home to the day care. When this father began talking about using any of the alternatives to the car he described how much more difficult those would make his daily trip:

We have two children that attend the day care here at my job at NRK, 7 km from where we live, and I am the one transporting them to and from the day care, therefore it is easiest with the car. If I was going to take the metro so I would have to walk a short distance between my house and the metro station and then I would have to walk a relatively long distance here to arrive at the day care. (...) yep, it is more comfortable to drive and easier.

This father talked extensively about the distance he would have to walk with his children if they were to take the metro to Majorstuen and also about the lack of space on the metro for his stroller. He made it clear that travelling with two children multiple kilometers alone was not an effective or pleasurable way to travel.

Another participant, a mother (age 43 with 2 children) who brought her two kids to the day care in a car, also described the automobile as the easiest form of transport. She said that the car enabled her to transport the entire family from A to B without making any transfer and also that she did not have the insecurity of worrying about whether or not the train leaves on time:

We live far away it is 25 km to drive. And I will have my two children with me, one two year old and one five year old. Where we live the only public transport option would be the train. It is very unsure if it goes and when it goes, especially when it is winter and cold, and to use that with two children, that we see as very challenging...so therefore we drive the car, it takes some time, and there is a lot of traffic, but still it is the easiest for everyday travel.

the day care and his ride on the metro as easy. The second father (31, 2 children) described both his walk to the day care and work and car use on the weekends as both easy.

Ease of use was connected with flexibility. Parents using the car used the word ease and flexibility to describe similar benefits provided by the car. Ease of use for the mother above was advantage of not having to wait on the train platform and to travel on a specific schedule or risk being affected by a delay.

Four parents reported using public transportation, more specifically the metro, because of how easy it was to access and travel on. All of the participants describing the metro in this way used it to arrive at work. A father (age 44 with 2 children) who used the metro to travel directly between his home at Carl Berner and his office in the centre of the city, described the mode as very easy and convenient for his needs. This father said that very little thought had to go into taking the metro, as it departed often and there were very few complications.

As mentioned, all the parents who used the word ease to justify using public transportation were metro users. Of these participants, only half were travelling with children. Therefore it was quite rare that a parent travelling with a child used the word ease as reason why they chose the public transport.

There were also three parents who cycled who described their choice as the easy option. One father (age 52 with 1 child) described his choice of using the bicycle as an attempt to actually keep his life as easy and simple as possible. He said that wanting to ride a bike to and from his work and child's day care forces him to live within a relatively close distance of the two, therefore making his travel life much more simple and easy. This father mentioned ease of use as the number one reason he chooses the bicycle on a daily basis:

I: Why do you choose the bicycle as your preferred mode of transport?

P: I choose the bike because it is the easiest, it is the best way to move around in relation to where we live and where we work. I work at NRK. It takes 10 minutes to cycle one of the ways and only 5 minutes to cycle the other. It is quite simply the easiest.

The two parents who walked both described their journeys as the easy choice amongst others. This way they were not dependent on any outside machine or having to wait in order to make the required journey in the transport triangle.

Ease was also mentioned as a factor for why parents chose a mode of transport for other trips. A father (age 31 with 2 children) described his families use of the car as “more luxury, than pure necessity”. He said that on the weekends it was much easier to use the car to arrive at destinations that were not within walking distance. This father who lived in St. Hanshaugen in Oslo, said that in actuality his family did not really require a car to accomplish what they needed to.

However, because they already owned the car and it was easy to use, they took advantage of that. A mother (age 39 with 3 children) also described her and her families use of the car for trips outside of the triangle transport as a matter of ease. She described in her interview that with three children it was very difficult for her to use any other mode.

Participants using all the different modes mentioned ease as a reason why they chose to travel with that particular mode. The modes more likely to be described as easy to use were those driven by the individual. One might assume that a mode driven by someone else might be easier. But for this demographic, travelling with small children, the public transportation options were those less commonly viewed as easy.

4.2.3 Enjoyment

A common method used by participants to explain why they chose a transport mode was to describe the way in which they enjoyed using it. Instead of describing the mode simply as something that transported them from A to B, many participants also said that they chose their preferred mode of transport because they derived enjoyment from it. Participants often described the enjoyment of using the car or bicycle as justifications for choosing those modes. Public transport and the car were, at times, explained as options that were not enjoyed.

Three of the twenty four participants described using the bicycle as their main mode of transportation in the triangle. All three mentioned enjoyment of cycling as one of the reasons why they chose the bicycle as their main form of transport. What these participants described as most enjoyable when using the bicycle varied slightly. A mother (age 31 with 1 child) described how she enjoyed the bike because it allowed her to work out every morning on the way to work, as her ride was approximately 10 km and mostly uphill:

(...) it is the mode that for the most part is the easiest and enjoyable to use. Now I have about 10 km to my work, and when I stand up in the morning it is very easy to jump right into my bicycle clothes and cycle up there, and I can take a shower up there, and then I have gotten to work out a bit and I have not used any more time than normal had I decided to drive (...) At work we have also a workout room, so then I can work out a few days a week, lift weights when I get to work. So I use the bike as a warm up on the way to work, so then I get both to work out on the bike and also use it as a mode of transport.

Another mother (age 44 with 1 child) also described her bicycle rides between her home, work place, and day care as a pleasurable experience, providing her the opportunity to get some exercise during the daily commute. She also discussed enjoying the fresh air, especially on the morning cycle to work. A father (age 52 with 1 child) who also cycles to and from his work and day care described how the cycling with his son gave them the opportunity to look at nature and talk to people along the way. Major attractions during the cycle to work and the day care were small animals such as squirrels and also digging machines that were sometimes parked along the road. This way the father said he was able to spend quality time with his son, having experiences they would not otherwise have had. He also said he enjoyed the simplicity of the bike ride. Yet, an important variable to consider when looking at the parents who cycled was the fact that they all three had only one child. Participants with more than one child were unable to cycle and less likely to utilize modes other than the car.

Out of the five parents who said they walk, three described the journey as being an enjoyable experience. A father (age 31 with 1 child) described his walk to the day care in the morning with his son in much the same way as some of the parents who rode the bicycle. He said that the 1 km walk with his son gave them the opportunity to look at the nature present along the road. He also described his son's request to always stop at digging machines so that they could take a closer look. Another father (age 43 with 3 children) who walks between home, his work, and day care at NRK described the enjoyment he and his son gain from the walk, stating many of the same reasons as the others. While this father also admitted that his enjoyment level decreases dramatically when it is extremely cold or rainy, he said that for the most part that was not the case.

Parents who used the car also described the enjoyment of driving. While a few described the car as simply a means of transport from one location to the next, others saw the car as something else. A mother (age 41 with 2 children) said that driving a car was not only to travel from A to B, but rather a pleasurable experience, something she enjoyed about her daily commute. While this mother did not go as far as to call herself a car enthusiast, she did describe herself as being above average for women in terms of interest level for nice cars and a desire to drive:

P: I like it a lot. I really like to drive a car. That is one part of the picture (...)

I: Can we talk about that? What is it about the car that you like? Has it always been this way? Since you were 18 years old?

P: Younger than that actually. Ok, I am a woman, but I have always been a little bit interested of cars in a way that I have always known car brands, in other words I have followed car brands since I was young, I was interested back then. Because we live in the center and do not need two cars, we decided to put a lot of money into one car so we have been able to buy a relatively expensive car.

I: And you are happy about that?

E: Yes, because i like cars, I feel that a car for me is not just from A to Å. It is an experience for me to drive my car. That is for sure.

It was clear in the conversation I had with this mother that she was very interested not only in driving, but also in the idea of having a nice car. This was something that the mother took great pride in.

A father (age 35, 2 children) talked about his 20 minute drive home from work as an enjoyable experience. He described in detail during the interview what he liked about this time to himself:

P: I don't like my way into work, but I enjoy my way home (...) it is my release at the end of a long day. It's fun to drive home, in the morning it is not.

I: And what do you do differently? Is it because of the traffic?

P: Yeah, I mean it takes 18 minutes, I just cruise home. I don't break any laws but yeah, music, my own space, I can leave when I want. It doesn't depend on the schedule or potential break downs or delays with the public transport.

This father discussed the enjoyment he receives from the car in a bit different fashion from the others by highlighting a particular journey. For this father, only the car could provide these few precious moments when he was alone and could "cruise home" with his music and at the pace he wanted. It was a time when he was not in the office and not at home. It was his time to relax.

Another father (age 31 with 2 children) said that even though he walks or bikes to and from work and the day care he does enjoy driving a car when having the opportunity. He described it as a comfortable feeling to drive the car on a nice sunny day in the summer out of town:

P: But it is true that if it is summer and nice weather and you have put on the summer tires, and the car is sitting nice on the asphalt, then it is of course a comfortable feeling. I like to drive cars.

I: So you like to drive out of the city to the cabin?

P: Yes, I don't think there is anything negative associated with that. I think it is just nice.

This father was one of the few who did not choose the car in the transport triangle, yet who enthusiastically described using it for other trips. He made it clear in the interview that his and his families use of the car was for the most part a matter of enjoyment and that he could not say it was of total necessity.

Participants who described using public transportation did not focus as enthusiastically as others on how much they enjoyed using that particular type of transportation. While some did describe modes of public transportation in a positive light, enjoyment was typically not at the top of the list for reasons why. Aspects such as speed, ease of use, and comfort were more commonly mentioned. The one mode of public transportation that was described most often in a positive light in terms of enjoyment was the metro, which could provide certain participants the opportunity to relax while en route.

Although many participants described travelling with their main mode of transport as an enjoyable experience, others were indifferent or even negative towards the travel. A father (age 43 with 2 children) who used the automobile to transport him and his family between the home, work place and day care described the experience as a “must” and fact of life during the week. This father, who drives a total of 50 km roundtrip every weekday with his family, did not find driving the car as enjoyable. Parents with the greatest distances to travel were the ones most often saying they did not enjoy the mode they used.

4.2.4 Freedom

The word freedom was used as a reason why a type of transport was chosen. Definitions of freedom in the online Merriam-Webster Dictionary are “the quality or state of being free” “the absence of necessity, coercion, or constraint in choice or action” (Merriam-Webster Dictionary 2011). 46% of the participants mentioned the freedom that a mode provided as one of the reasons why they chose it.

Ten participants in my sample mentioned freedom in their travel diaries or the interviews. When using the word freedom parents described not having to stick to a group schedule or travel with others in close proximity. They also were keen to emphasize their ability to live where they wanted, since they were not bound to any other form of transport to arrive at needed locations on time. Flexibility was also mentioned alongside and interchangeably with freedom by parents when speaking.

Most of participants using the term freedom to describe their transport mode, were using the automobile, both inside the transport triangle and also for other trips. One mother (age 41 with 2 children) said that she chose the car because it gave her the freedom to choose the fastest route on her way to work: “(...) what I mean is that when I drive the car I try and take the route which allows me to arrive fastest to where I am going. It is very important for to be travel quickly to my destination”. She said that she will often choose different routes to work and the day care depending on the amount of traffic there is in other areas. One reason she had trouble choosing the bus or metro to travel in the daily transport triangle is because they always must stick to the same routes, whether there is traffic or not. Another parent who mentioned freedom was a father (age 43 with 2 children) who also chose the car to travel between home, work and the day care. He mentioned the freedom of not having to depend on the public transport time schedules. The delays and cancellations which have in the past affected the NSB train service were also mentioned by this father:

We always use the car, it is our main form of transport and the reason why it is because of the freedom it provides, the flexibility that it provides, that one is completely independent of time schedules, delays, of course there are the delays in the traffic, but we see the public transport as not good for our use, quite simply. And it is too unreliable, in my opinion anyway. Did you follow the media last winter? The delays with NSB...and I am supposed to stand on a train platform and wait for the train for 15 minutes with a two year old and a four year old. Forget it! No, it just doesn't work.

Because he and his family live 25 km from Oslo, it was vital for him to have a mode of transport which was dependable and capable of transporting them in a

timely fashion on trips inside the triangle. A mother (age 35 with 2 children) who also lived more than 20 km from her work and day care at NRK gave a similar description of the automobile. This mode of transport, she said, allowed her the freedom to travel with the entire family plus belongings from home and into the city without the stress of switching from one transport to the next or discomfort of an unhappy child.

Parents, who used the words freedom or flexibility to describe modes of transport other than the car, gave different examples. The bicycle was described as providing flexibility in terms of parking at work. One mother (age 44 with 1 child) discussed the lack of parking places for cars at her work place in the centre of Oslo. She said that riding her bike made parking very easy as she could park right next to the entrance of her building. Another participant, a father (age 31 with 1 child) who used the metro between the day care and work, also described the freedom of not having to look for parking when he arrived. He described not only the freedom from not having to find a parking spot but also the financial freedom of not having to pay for one either.

The one mode described most frequently as providing its users with a sense of freedom, was at the same time also appearing to lock its users in. Many car drivers said that they used this mode because of the freedom it provided. Yet, these same parents who in one sentence were talking about freedom were in the next sentence communicating dependence they had on the car. This paradox was prevalent in the data amongst car users. A mother (age 43 with 2 children) used the word freedom in her time use diary to describe what she liked about the car. In answering the next question in the diary, this mother wrote that she felt as though sitting in traffic jams everyday to and from work was a hopeless experience. She described in the interview that she felt locked to the car as it was the only way she and her husband could transport their two children and themselves the 50 km daily that they travelled in the transport triangle. This freedom - lock-in paradox was evident not only in speaking with this mother, but with other parents as well. Car driving parents consistently described the car as

something which provides them freedom, yet also something they have become completely dependent on and unable to move away from.

A father (age 43 with 2 children) also used the described the freedom provided by the car just a few sentences before talking about being locked-in to using it.

P: It is the car because of the feelings of freedom it provides in my opinion (...) The biggest reason that I use the car is the flexibility (freedom) it provides. That is number one. (...) that I am not dependent on another person or group of people to transport me from A to B.

I: Do you feel that you are locked-in to using the car to arrive on time at all daily tasks.

P: Yes, I feel that way. For us it has become that we use the car as a solution to the problem, we have access to it and can use when whenever we need it.

I: And how do you feel about that? How do you experience a trip in the car, is it stressful, do you see it as an opportunity to relax?

P: It is a must. You don't really get much done while travelling, and there are quite large variations in traffic, sometimes it is okay, but for the most part there is a lot of traffic and traffic jams, aggressive drivers, and at the end of the day, many others are tired, I sit and listen to the radio and try to just disconnect the aggressive part of the experience at least.

This father felt totally dependent on the car to arrive at the majority of destinations. Yet, he used the word freedom to describe what the car provided him and his family. This was not uncommon in the sample, creating an interesting contradiction. It appeared as though the mode that was making its users feel free was also locking its users in.

4.2.5 Comfort

A participants comfort, both physical and mental, when travelling was frequently mentioned as an important variable in the decision making process. Eleven parents used the terms “comfort” or “comfortable” as a reason for choosing a main mode of transportation. This was another justification that was evenly spread across all modes, with people’s opinions of what comfort meant being

quite different. The only modes of transport not described as comfortable were the bus and tram.

A father (age 31 with 1 child) who walks with his child every morning from his apartment to the day care and then onto work, described the journey as first and foremost comfortable. He said that walking outside with the fresh air and space around him was a more comfortable alternative than taking the tram or bus, also available to him for the trip. This father, who owns and uses a car, mostly for other trips outside the transport triangle, expressed the importance of comfort when travelling between locations: “I: Why do you choose to walk on the weekdays? P: Because I feel that it is easy and also because it is comfortable to be outside walking.” This father’s view of comfort was concentrated on his ability to transport him and his child while taking in fresh air from outside and to enjoy the leisurely walk.

Comfort was also mentioned by several car drivers as a main reason they chose the car. Eight out of the eleven participants who mentioned comfort were car drivers. These participants described the fact of always having a seat available and being able to protect their family from overcrowded public transport and the weather as major bonuses with the car and the comfort it provides. The metro was also described as comfortable by a few participants, as they described the space provided to them to sit on the journey compared with other forms of public transport.

Another issue raised by parents concerning comfort was the ability to bring a stroller onto a transport mode. Travelling with a stroller is the reality for many participants. Available space for the stroller was an important factor in whether or not the transport was comfortable for the participant. A father (age 33 with 2 children) related the ability to take a stroller on the bus to comfort:

When we had only one child in the day care we took a lot more metro because then she was so big that she could walk the distances between the stop and where we were trying to go. But when you have two children and the youngest is under two years old so we don’t really see it as realistic

option, especially when you begin to bring with a stroller everyday and it starts to be a big hassle. On the metro [during rush hour] there is never enough space for the stroller. So what I have is not preference for the car in itself, it's just that it is the most effective way to transport oneself and two kids, for my transport needs at least. (Father 33, 2 children)

If the parent found it difficult or impossible to take a particular mode of transport due to a lack of space for the stroller, this transport mode became very difficult to use. The stroller was often mentioned by parents as a major obstacle for taking public transport.

Descriptions of comfort on the different modes of transport varied depending on whether or not the participant was travelling alone or with family members, particularly small children. Parents travelling alone were more likely to describe using the bus, metro, or tram as comfortable than those travelling with a child. Descriptions of comfort changed when children were present. People living far away from the day care were often choosing the car because of the comfort issues they would encounter on the public transport options. Comfort was easier for parents to find on all modes when they were travelling alone and not with children.

4.3 Environment

One goal of this research was to discover whether concern for the natural environment influences transport mode choice. Towards the end of each interview, all participants were asked that question. Participants had already mentioned the reasons that came to their minds, as to why they travel the way they do. What I wanted to investigate was whether concern for the natural environment also was a reason why people chose one mode over another.

After coding the transcriptions for responses to this question, I separated the answers into three main categories:

1) *I am aware and concerned of the environmental impact of certain travel behaviors and I do consider the natural environment when choosing a mode of transport.*

2) *I am aware and concerned of the environmental impact of certain travel behaviors, but I do not factor this in when choosing a mode of transport.*

3) *I do not take the natural environment into consideration at this stage in life when choosing a mode of transport.*

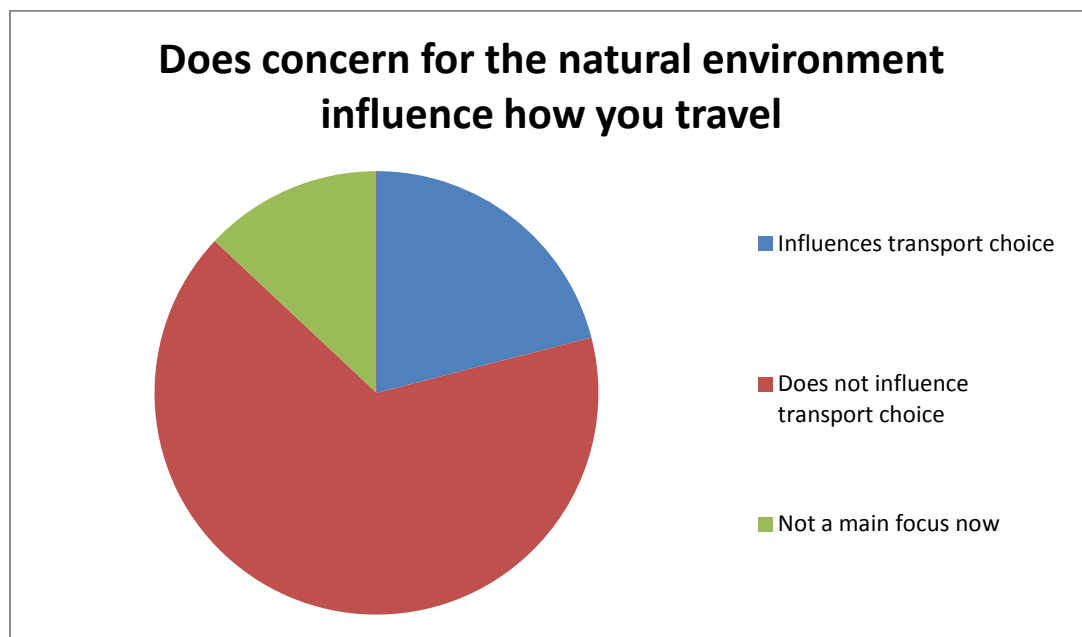


Figure 2: *Does concern for the natural environment impact travel behavior?*

In reality, few participants said that concern for the environment had a major impact on their decision and no one said it was the number one reason for choosing a transport mode.

Most participants said that they were *aware and concerned of the environmental impacts* of certain travel behaviors *but that it did not impact the way they*

travelled. There were other factors present that outweighed the environmental reasons. In total, 66% of participants answered in this way.

A feeling of concern but with no choice to change the situation was something participants expressed in the interviews and travel diaries. Many of these participants expressed that because of time constraints and the logistics required for effective drop off and pick up of children, they saw no other options then to choose their current mode of transport.

The reasons given why environmental concern did not influence transport mode choice were many and varied. One participant, a mother (age 36 with 2 children) explained that she was very concerned about the environmental impact of people choosing less sustainable forms of transport but she saw little choice in the matter. Both her and her husband needed a car to drop one child at the school, the other child at the day care and to both arrive into Oslo city centre to their jobs in a reasonable amount of time. Even though she did express a concern for the environment, she also admitted that her transportation habits did not reflect this concern.

I am not an environmental activist, but I am concerned about taking care of nature in the way that I can. I recycle and I try and do those types of things, but I don't drive a particularly environmentally friendly car, I don't have an electric car for example, that I don't have. Because I think a little such that, yes, cars are actually not good for the environment, but it is a way to get around. A mode of transport that most people in today's society use.

Here she explains that she understands that use of a normal gas powered car is not the most environmentally friendly choice, however, this mother like many other parents was unwilling or unable to change her transport mode at this period in her life.

Another participant, a father (age 31 with 2 children) who walks or cycles from his home to the day care and later on to his job, said that he was well aware of the environmental impacts the use of transportation causes, but that it was not a concern for the environment that made him walk or cycle is weekday commute.

It was more a question of practicality. He was going to choose the mode which provided him the easiest and most comfortable form of transport. This type of response was echoed by other participants who said the decision to use the bicycle or public transport was not a result of idealism towards the environment, but rather a decision of practicality. The environmental benefits, if any, were seen by them as a bonus.

Some participants, a significantly smaller number than above, said that they were *aware of the environmental impacts* of certain travel behaviors and that *it did impact the way they travelled*. However, none of these participants said that it was the number one reason for them choosing their main mode of transport. All of these parents said that concern for the environment combined with one or two other factors was the reason for them making their transport choice. About half of the participants who answered in this way did not own a car.

A father (age 31 with 1 child) who did not own a car, said that he, in terms of transportation, tries very hard to be environmentally friendly. He said that he would go a long way to continue having as minor an environmental impact from his travel mode choices as possible:

Yes, I try to act in an environmentally friendly way, so I go as far as I can for that (...) even if I had a lot of money I would still try and not use a car. Because of the environmental impacts it has. (...) I am actually a little bit against the use of cars, I feel that there should be a lot higher costs associated with driving in the city in relation to the amount of traffic...

This father was clear in his opinions that he did not understand what he saw as excessive use of motorized vehicles in and around Oslo. He made it clear that he does what he can to walk, cycle, or use the public transport available to him.

Another participant, a mother (age 31 with 1 child) who uses a bicycle as her main mode of transport, said that of course other factors play a role in how she travelled but that her concern for the environment was one of the main reasons why she did not choose the car as her main mode of transport. Two other

participants, a father (age 43 with 3 children) and a mother (age 36 with 1 child) also said that environmental concern had an influence on how they travelled.

There were a few participants who responded to the question of environment by stating that *concern for the natural environment was not taken into consideration at this stage in life when choosing a mode of transport*. In no way did it factor into their transport choices. Of the participants who responded in this way, all were automobile users and had children at the NRK day care. They said that they did not think about the environmental impacts of their travel choice.

A mother (age 41 with 2 children) responded to the question of environment by stating that her time with her family is more important to her than thinking about the environmental impact of her car use. She went on to say that not having access to the car would have such an impact on her work and family life that she could not think about the environment at this point. She expressed that the environment was not a main focus:

I: We spoke briefly about it, but does concern for the environment factor into your choice of transportation mode? (...) Is concern for the environment a main focus of yours?

P: No, not environment, not now. As said, it is true, my everyday tasks are prioritized ahead of the environment, sorry.

Another participant, a father (age 43 with 2 children) responded to the question by saying that his primary concern was for his family and himself. The fact that the car enabled them such reliable and flexible transport cancelled out any concern for the environment he had. This father also said that his family's decision to travel by car was in the big picture just a drop in the ocean in terms of pollution and congestion levels.

I think first for myself and my family. Many begin to mix in environment and that sort of thing, 'I am not going to drive here or drive there'. I believe that it is a drop in the ocean. If I park the car one day and hop on the train or if I drive that day...I don't believe it makes any difference at all because it is such a tiny fraction...it is here that I am a bit self-centered. I think primarily for myself and my family, in other words, what is the

best for us. Because I don't think that public transportation is sufficient for a family with children.

The other parent who responded in a similar way was a father (age 33 with 2 children). He explained that thinking about the environment was not something that he does much of at this period in his life. Having two kids in a day care 7.5 km from his home, made it very difficult for him choose any other mode than the car. He concluded his answer by stating that in his opinion he is allowed to be a little more selfish in this period of his life when he has small children.

Two participants answered the question regarding the natural environment mostly by discussing the role of government and policy decisions. These two both stated that environment is thought about when they decide on a transport mode, but, because of the lack of initiative by government, it becomes very difficult for them to choose the most environmentally friendly mode of transport.

One of the participants, a father (age 43 with 3 children) said that the question of environment and whether or that is factored into his decision making process is a tricky one. He said that he has yet to see any plan by the Norwegian or Oslo governments to incentivize purchasing of a hybrid vehicle. He also mentioned that the electric cars are still too small for a family of five, and that the toll and tax systems are simply a way for the government to collect more tax revenue, and not actually intended to decrease people's use of the car. This father stated that when an electric car comes out which is large enough for his family he will seriously consider buying one.

Another participant, a father (age 35 with 2 children) also discussed the role of the government when asked about environment. This parent, who lives in Bærum, discussed how difficult it was for him to travel to and from work using public transportation. The reason he gave was due not to the distance he was living from a bus or metro stop. Rather the best alternative, the metro, has been under construction for many years. He went on to explain how the bus, serving as the substitute for the metro, is afforded no priority lane and as a result sits idle in the morning traffic jams along with all the other car commuters. He expressed

that in his opinion the government has made little effort to make the public transportation option appealing enough for residents. This participant said he hoped to take the metro once the stop opened back up.

Participants appeared for the most part well informed of the impacts that certain travel behaviors have on the natural environment. Yet the majority of parents responded by saying that concern for the environment did not play a major role in influencing their transport choices. Other factors were simply more important.

5. Discussion of Results

This chapter will compare the results of my field work with the relevant literature I presented in Chapter 2. The goal of the chapter is to further increase understanding of why parents chose certain modes of transport.

5.1 Time and its impact on transport choice

Almost every participant in my sample mentioned time as a reason why they chose their mode of transport. But the manner in which participants described time varied depending on the transport mode they used. Information from the interviews demonstrated that participants who chose the car were more likely to use this justification by stating that their choice of the car saved them time on travel. Participants not using the car, on the other hand, communicated time and time savings differently. A study of participants' description of time savings and transport together with the most relevant literature provides insight into how ones perception of time-savings changes depending on the mode of transport they choose and the distances they are required to travel.

Car users frequently characterized their mode of transport as a "time saving machine" allowing them to reach scheduled tasks. Car drivers were likely to describe their travel requirements as unmanageable without the car. These participants were clear in their descriptions that the car was a device which saved them time on a daily basis. This was in sharp contrast to how participants who did not use the car described time savings. Participants who did not choose the car for trips inside the triangle described their modes differently. Non car users inside the triangle stated instead that there mode of transport was fast enough for them or that the speed did not matter all that much because they were enjoying other aspects from that mode.

My data, to a large extent, validates Røpke's "paradox of time-saving" theory. Those most likely to describe the existence of daily time pressures were those who lived farthest away from key locations such as the day care and work, and who were required because of the distances, to use a car. While these participants did not report using on average significantly more or less time in transport than others, they did report travelling much greater distances. Participants who reported using the public transport, walking, or bicycling travel segments did not communicate the same time squeeze in their lives and the need to save time through use of the car. These participants lived on average closer to both the day care and the work place. The data demonstrated no correlation between using a car and participants reporting less rush and more leisure time. In fact, the exact opposite appeared, with car drivers describing the need to travel greater distances, to reach more activities, and more time-squeeze.

Data from the field also reinforces a theory formulated by Hupkes. Hupkes (1982) writes that the amount of time people dedicate to daily travel has remained constant despite an increase in travel speeds of up to 30% (Hupkes 1982: 39). The findings from this research related to Hupkes' theory in that the data showed no significant difference between the amounts of time that car users and users of other modes dedicated to daily transport. Once again, differences arose when looking at the distances these participants travelled. Car users travelled on average much greater distances inside the triangle than users of other modes.

Hupkes' theory helps explain why almost all participants in my research who worked in Oslo but lived in Bærum or other areas outside the city chose the car. It was essentially impossible due to the distances for these parents to arrive at their offices within an acceptable amount of time using forms of transport other than the car. The drop off or pick up at the day care added even more time to the journey, making it more likely that these participants chose the car. This kept these parents' travel time to below 45 minutes each way and therefore within what Hupkes describes as a tolerable length.

Dale Southerton writes about people's tendency to rush around or group periods of haste in order to leave designated times for calm and caring for loved ones in what he terms as hot and cold spots (Southerton 2003). Many parents, particularly mothers in this study, described a similar reality where one reason for using the car was to leave enough time where they could show care for family members. One mother (age 42 with 2 children) acknowledged that she felt there was a lack of time in daily life to provide for her children and to be a good partner. She said that the car allowed her at least one hour extra each day to be with her family. For this mother, as well as others, the car allowed for their children to spend fewer hours in the day care and for them to spend less time commuting. By using the car, these parents were able to drop their children off later and also arrive back earlier to pick up. Some parents said that the car reduced their child's daily stay at the day care by up to an hour. This was important for these participants in order to feel that they properly were caring for their loved ones. This example from my research complements Southerton's theory of hot and cold spots. Parents would describe their own realities in this hot and cold spot fashion when talking about daily life and the time pressure which exist.

For other mothers, the car provided a space of comfort and security where care could be shown to family members. These mothers portrayed a slightly different reality from Southerton's hot and cold spots. Instead of separating quality time with family from times of haste, for a few families it was combined. Quality time with the kids took place during an hour long one way commute between the home and the work place and day care. The mothers who experienced the daily commute in this way were both living more than 20km from the two locations. These parents spent nearly two hours each day with the entire family travelling in the car. Because their children attended the NRK day care located directly next to the parents work place, the travel into and out of the city was together. While these mothers said that they could just as well do without the long commutes on a daily basis, they also said that they had grown to appreciate the family time it provided them. Both of these mothers preferred this situation to having their

children spend an additional two hours every day in a day care close to their homes. These parents had such long commutes and lack of time at home with the children that they combined their rush hour with time for care.

Although the data did indicate that participants had a tendency to rush in order to create what Southerton terms as cold spots, the data did not show that this had any influence on the mode choice in the cold spot. In fact, participants were more likely to choose the car for trips outside of the triangle than they were for trips inside. This illustrates that participant's reason for using the car goes beyond time constraints with other variables playing major roles as well.

Even participants who chose to walk, bicycle, or use the public transport inside of the triangle were likely to indicate use of the car when making other trips outside. There was no indication from the data that participants chose slower moving transport even though certain time constraints were less frequent. A mother (age 31 with 1 child) who never spoke of rush or time constraints when discussing her travels inside the triangle, did say that her family usually chose the car when travelling to her parents house for Sunday dinners. She said that the car took less time and cost less money for the three to make the trip. Another participant, a father (age 31 with 2 children) also described consistent use of the car for trips outside of the triangle, but rare use when travelling inside. This father reported little or no feelings of rush when travelling inside the triangle. His reasons for using the car when outside of the triangle were less for rush purposes and more to achieve a sense of freedom.

Although those who used the car reported feelings of time pressures more frequently than non car users, it is not necessarily the car which creates this. Instead, relevant literature points to the impact scheduling practices have on increasing feelings of rush and time-squeeze (Shove 2003, Sheller and Urry 2000). Because one's ability to travel with the car allows them to leave and arrive when they want, choose their route of travel and to transport themselves relatively independent and separate from others in society, a tendency for

individualistic scheduling arises. It is one's inclination to move away from the practice of communal schedules and towards more individualism which causes the feeling of time squeeze to occur in car users. No longer are schedules coordinated, but rather individualized and scattered, creating an increasing need for the car in order to achieve scheduled daily tasks. In other words, it is not the car but rather the way people structure their time when using the car that created feelings of rush. I found that participants in my sample who were car users did describe more transport intensive lives, while others without the car described as more simplistic schedules.

5.2 Free to choose or locked-in?

During the interviews, participants shared their transport mode choices and also gave justifications for use. It was common for a person to feel that their choice was one that they themselves made and not one that someone else or something else made for them. While it is often assumed that most consumption choices are left up to the individual, it can be argued that transport mode selection is influenced by various institutional and structural factors.

Freedom was mentioned as a reason that parents chose particular modes of transport. Yet, as discussed earlier, many of these same parents who described choosing a mode because of the freedom it provided them, also said they were locked-in to using that mode. These parents were quicker to mention the freedom they felt they achieved when choosing a transport then the fact that they had become dependent or locked-in to using that mode. A few of the different causes for lock-in are presented below.

One of the ways that participants became locked-in to using a specific mode of transport was through their choice of a home location. For parents with young children, achieving freedom could mean having the ability to travel to a safe and clean environment where children could be raised. This is understood by many to

be away from overly busy streets in the city centre where crime is more likely to occur, and where it is more expensive to have a yard surrounding a place of residence. Parents therefore have a tendency to move out of these urban areas to free themselves from the undesirable aspects of city life. In this move, people willingly increase the complexity of their travel schedules, deciding to live in areas where it is perhaps more difficult to walk or bicycle to locations and where the public transport option is more infrequent and takes more time. For many, this search for personalized and safe space has had the impact of locking one in to a transport mode, often times the car.

When a move is made to leave an urban area for neighborhoods outside of the city, the family ends up living in areas with a lower level of “urban intensity” (Newman and Kenworthy 2006). As these two authors called attention to, a certain level of urban intensity must be maintained in order to support a functioning and effective public transport system and the possibility for walking and biking. All participants living outside of Oslo chose the car for at least one part of the journey inside of the transport triangle. For these parents there was no escaping the use of the automobile on at least one leg of the journey. Marchetti’s Constant explains this by stating that human beings are accustomed to using approximately one and a half hours per day for travel (Marchetti 1994). People living multiple kilometers from their work place, coupled with the need to drop off a child, increases the likelihood they will use a car. Public transport, bicycling and walking are out of the question once the distances become too great and the trips require multiple stops. These same parents reported equally frequent use of the car for trips outside of the transport triangle as well. The distances these parents were required to travel had them locked-in to using the car for journeys of all kinds.

Urban intensity of a certain level also impacts the proximity at which a family lives to the day care. As has been suggested, there was a strong tendency for parents to stay away from long commutes on public transportation with children. Reasons parents gave for staying away from the public transport service when

travelling with children were many. Parents spoke of need to walk between stops and the uncomfortable experience of travelling with children while being surrounded by strangers as a few examples.

On the other hand, most parents living closer than 2km from the day care walked or cycled the distance. Data from the research showed a strong correlation between where the day care is located in relation to housing and how parents travel between the two. Day care location, just as pursuit of freedom and financial constraints had the potential to create situations of lock-in.

The search for freedom does not stop at choosing a place to live with more space and a yard. It continues with the way in which people schedule transport. For many, freedom is the ability to set ones schedule, to leave when one is ready, not having to depend on others or other time tables to get around. The individualization of scheduling practices also could also have lock-in affects. As has been presented in the literature, the more individualistic ones schedule, the more complex coordination becomes between individuals (Shove 2003, Sheller and Urry 2000, Southerton 2003). Fewer and fewer people can rely on the communal schedules which had the affect of keeping people relatively synchronized in terms of daily routines. Instead, individual scheduling has made it increasingly difficult for people to live without the need of a fast and independent mode of transport. This coordination problem requires that people rely on their individual travel modes to transport them as swiftly as possible to meet obligations. This tendency to individualize the schedules, brought on by individualized modes of transport, has increased feelings of rush and lead to people being locked-in to the car.

Another factor which could be the cause of a feeling of lock-in was financial constraints. Some participants mentioned their choice of home location was a result of financial constraints. Because these parents felt more comfortable raising their children in areas where they could have a yard and a large enough house for their family, they saw a need to move away from where their job was

located in Oslo. Parents who described their situation as such felt a need to provide for their family with sufficient space both inside and outside the home. This search leads these parents to live multiple kilometers away from their work place and locked-in to using the car both inside and outside of the triangle.

A different type of cultural lock-in also appeared in the data as many participants talked about the relationship between car ownership and the arrival of the first child. One participant in particular who did not own a car, described this situation in detail, explaining the fact that he didn't understand why it was ingrained in the thoughts of so many Oslo area residents that having a child always meant needing to buy a car.

(...) It is a thought that is stuck in the heads of Norwegian that if they have a child, they must have a car. Everyone who has a child says: 'Ok, now we have a child, now we must have a car.' Why is it this way? Why does everyone have to have a car? Why does everything suddenly change? I think it everything goes alright without a car.

While this was the only participant who spoke fully about this potential cultural lock-in, many other parents mentioned in the interviews the first car coming with the first child as a fact of life. Parents described a changing transportation situation when a child was brought into the family. This situation was described as changing not only because participants had the tendency to move out of the city once the first child was born, but also due to the requirement of travelling with one more person. Eight participants in the sample described the purchase of a car connected to the birth of the first child during the interview.

5.3 Comfort, Ease & Enjoyment

Participants used the words *comfort*, *ease* and *enjoyment* to describe why they chose a mode of transport.

Individuals who used the term comfort were often referring to physical comfort experienced when using a mode. This word was used across modes, with no one mode standing out as the one most likely to be described as comfortable. Data from this research complements the idea that comfort is a social construct which reflects the values, beliefs and perceptions of those who use the word (Cooper 1982: 270 in Chappells and Shove 2005: 32).

A common tendency for those who used the word comfort when referring to a transport mode was to describe the immediate physical surrounding that the mode provided. Adequate space was what the majority of participants talked about when referring to comfort. Participants were much more likely to describe public transportation as comfortable when they were travelling without children. This had to do with what Parkhurst and Parnaby (2008: 357) describe as a “perceived control over the conditions”. The majority of parents said that travelling on public transportation with children was very hectic because of the lack of space available. Use of the word comfort to justify the choice of cycling, walking or use of the automobile also appeared to revolve around control of a situation and adequate space.

Participant’s use of the word *ease* was associated with their ability to make decisions based on an individual time table and needs. A mode of transport was described as easy when the participant was not required to plan or think through their use. The transport mode was available at all times for what participants needed. This information from the data contributes to and can be better understood by looking to what Sheller and Urry (2000) and Shove (2003) have written in regards to scheduling practices. For the majority of participants, use of the word *ease* was a synonym for flexible or the ability to individualize their daily transport schedule. *Ease* was also associated with the ability to find parking when the mode was not being used.

At first review, participant’s use of the word *ease* to justify use of a transport mode could be seen as obvious. However, a look at the literature which discusses

the affects from individualized scheduling reveals a more complex situation. Particularly when participants justify their use of the automobile because of the flexibility it provides them in terms of scheduling. The same reasons that participants give for the automobile being easy, can also be argued to increase the complexity of schedules for everyone. This has to do with the affect that one's tendency to individualize their schedules has on coordination with others in society. Justifying the use of a mode because it is easy could be argued to complicate coordination of schedules on a larger scale. What is easy and convenient for one individual does not necessarily translate to being what is more beneficial for a group.

Participants also spoke about the enjoyment they gain from a mode of transport as a reason for choosing the mode. Participants who used the car and bicycle to travel were most likely to say that enjoyment factored into their decision. Responses from participants in my research support the arguments made which highlight the enjoyment people derive from consumption and the reasons behind this (Scitovsky 1986, Campbell 1998, and Bauman 2001). On the other hand, data from my research can also contribute to and support the arguments of Hupkes (1982) and Reisch (2001) which discuss the reasons way enjoyment created from transportation fades after a certain period of time.

Participants who used enjoyment as a justification for their use of the automobile were likely to describe it as an object with more value than simply transporting them from A to B. To these participants, the car was described as a fine machine, providing them a needed sense of diversion and excitement. These descriptions of the car correlate to Bauman's (2001: 10) description of humans search for "hubbub and bustle" and Scitovsky's (1986) ideas around a lack of excitement and stimulation in modern life. Portrayals of bicycle rides also matched what was described by the authors. Nevertheless, enjoyment that a participant gained from transport was limited to a certain time frame. Parents who were locked-in to the longer commutes made this point clear.

Those who said they did not enjoy a mode of transport blamed traffic jams, time used and a lack of space as the reasons why. The information surrounding non-enjoyment given by car drivers supports theories written about by Hupkes (1982), Røpke (1999), and Reisch (2001). These participants said that they felt locked-in to using the car and contemplated ways to reduce the amount of time they needed to spend in their cars. One of these parents was in planning stages of moving from Oslo back to her home town on the west coast of Norway where she would live much closer to the day care and her work. These participants were the ones living farthest from their office and their child's day care. Other participants who said they did not enjoy a transport mode they routinely took were users of the tram or bus. One mother specifically spoke about the lack of physical comfort she felt when on the tram. Other participants discussed specifically how uncomfortable it was to bring the stroller onto the tram and bus as a reason for not enjoying it.

5.4 Does concern for the environment impact choices?

A main purpose of this research was to uncover whether or not people's transport choices were affected by a concern for the environment. According to the data collected, concern for the environment was almost never the deciding factor in people's choice of a transport mode. While a majority of participants did respond by saying they were concerned and that they made other attempts in their lives to act in environmentally responsible ways, transport choice was not one of them. Participants stated that what they had to sacrifice in terms of mobility was too much for a minor contribution to the environment.

For those who chose the automobile, moving away from that choice to a more environmentally friendly form of transport, would have a significant impact on their life. In many cases, it would not only make the daily commute longer in terms of time, but it would influence where they could choose to have a home and

what activities they were able to participate in outside of the transport triangle. Many of their lives had been structured in a way that moving away from the car would have serious disruptive consequences.

Environmental concern was neither mentioned by those who tended to use a mixture of modes other than the car. These participants, just like the car drivers, said that concern for the environment had less influence on their choice than some of the other factors mentioned. Although the awareness of the environmental impacts of transport mode choices existed, this knowledge rarely translated into changed how people travelled.

There was a disparity between attitudes and behavior when it came to choosing a transport mode based on concern for the environment (Crompton and Kasser 2009: 58). Although almost all participants mentioned an awareness of the environmental consequences certain transport modes have, there was almost no tendency to base ones transport mode choice from that information. Instead, participants exhibited a variety of strategies to talk around the question of whether or not concern for the environment factors into the choice. Many of the coping strategies identified by Crompton and Kasser (2009) as ones people use when confronted with the question of environmental problems were apparent in the responses of participants.

These coping strategies discussed by Crompton and Kasser were written about in relation to how “humans attempt to manage threats to their existence, their self-esteem and the integrity of their identity” (Crompton and Kasser 2009: 15). One type of defense mechanism written about by the authors and apparent in my sample was the effort to replace the anxiety creating questions with other topics. Two examples of this mechanism were referred to as “keeping one’s thoughts in the present” and “seeking pleasure” (Crompton and Kasser 2009: 16-17). An example from my data of participants “keeping one’s thoughts in the present” was a parent responding by stating that they were in a period of life where they were allowed some slack on these types of responsibilities. Participants claimed

that because they were a parent of one or more small children who depended on them for transport, that they were more occupied with getting through the present day a not able to think so far in the future.

Another type of defense mechanism, “seeking pleasure” was also brought up by parents when asked about the environment. This was done by car drivers who would claim that their choice of the car was not only because it took them from point A to point B quickly, but also because they enjoyed driving. These participants went into great detail when explaining their feelings when driving a car or when purchasing a particular brand of car. As if the pleasure that one acquired from the activities of purchasing, caring for and driving of the automobile changed the fact that it brought with it negative impacts on the environment.

Two other strategies highlighted by Crompton and Kasser and also apparent in my data set were “projection” and “activating valued elements of one’s identity” (Crompton and Kasser 2009: 18-19). When asked about the environment, some participants projected the blame onto the government or certain industry. Blame was placed on government’s inability to make it easy for people to behave in more environmentally responsible ways. Everything from the slow pace of construction to the lack of tax incentives for buying a hybrid vehicle were reasons people used as why they were not having less impact on the environment. Blame was also projected on industry, who some participants said were the real culprits in terms of environmental degradation. These parents explained that what individuals contribute is in no way compared to what industry does. Therefore, it did not matter in their eyes if they cheated a bit on how environmentally friendly their choices were. The final defense mechanism written about by Crompton and Kasser and also identified in this research was to answer the question of the environment by pointing out other environmentally friendly actions they partake in. Immediately after admitting that concern for the environment did not factor into their choice of transport, many responded by saying that they took other

actions which were environmentally beneficial. The most common activity to mention was recycling and the separation of their trash.

The idea of tapping into one's social and environmental identity was another strategy written about by Crompton and Kasser (2009). These authors argued for a possible correlation existing between experiences of environmental identity and acting in an environmentally responsible manner. Few participants mentioned any alliance they had with the natural or non-human world. Instead, participants were more likely to discuss the connection they had with society around them. There was more a concern to keep up in work and to provide opportunities and love for family members. According to the authors this lack of connection with the natural environment could be evidence for why transport behaviors of participants were so rarely affected by concern for the environment. A kind of partnership with the natural environment did not exist.

A focus on values and identity could have the potential to positively impact information campaigns conducted by environmental organizations, as Crompton and Kasser have written. And this strategy might influence citizens to behave in more environmentally ways. However, for the case of transportation, the effort would be insufficient if it were to stop at the individual. Too many other aspects have influence on how one travels. These components are often times out of the hands of any one individual. Urban sprawl, day care availability and location, access to fast and efficient public transport and financial constraints all impact the way people travel and are equally important if attempting to reduce the environmental degradation caused from transportation.

Data from the field highlights that concern for the environment was never the number one influence in one's decision on how to choose a mode of transport. If the environment was a part of the decision, it came down the list of reasons, always considered with other justifications. Concentrating on influencing people's values instead of attempting to make them more concerned or attached

to the environment may perhaps be the most effective way to have an impact in this area.

6. Conclusion

Many residents, particularly those living in urban areas with access to education and various information sources, are informed of the impacts motorized transport has on the environment, both at the local and global levels. Yet, this information alone does not seem at first glance to have any impact on the way people are travelling. As a personal witness to the large and slow moving traffic queues of Oslo, my research focuses on understanding the motivations behind transportation mode choice. I wanted to learn about why people chose to travel the way they do with an end goal of contributing to research focusing on how Oslo residents can travel in more sustainable ways.

Parents with small children were the focus of this research. I chose to study this segment of society for a number of reasons. One of those reasons was that this group is one likely to have a special need for fast and efficient transport. By looking at a sample of these residents, I could better understand society as a whole, in terms of why they were travelling a certain way.

Having observed traffic jams in Oslo, my hypothesis was that research participants would choose the car in overwhelming numbers. Before setting out to do the research I did not understand how working parents with children in the day care could possibly arrive at all required destinations on time without using the mode that it appeared so many were already choosing. Therefore, it was assumed at the outset that this group was locked-in to using the automobile, unable to choose modes which are considered more environmentally sustainable.

I contacted day cares located in different areas of Oslo to find parents interested to participate in the research. Once a sample group was established, I conducted a qualitative study consisting of semi-structured in depth interviews and time use diaries to learn more about the travel habits of these citizens. The travel diaries were filled out over a period of one week day and one full weekend after the interview had taken place. I transcribed all interviews and placed relevant themes

and data into a large table for review. This table allowed for an overview of the sample and made it possible to find many of the relevant themes and data mentioned in the text.

While this research did begin with the assumption that parents of small children were locked-in to using the car, the data suggests that this was not necessarily the case. Instead, lock-ins were found not to be a result of having children in the day care, but rather, of the distance one is required to travel and the time it takes them to cover this geographical area.

Car driving participants, especially those who indicated no other alternative for travel, were for the most part living multiple kilometers from both the day care and the place of work. The farthest travelling participants were choosing only the car, as the distances which needed to be traversed in a certain amount of time were impossible without the speed and flexibility it provided.

The data suggests that home location played an integral role in deciding the type of transport a parent would use. Those participants living in areas with less urban intensity were more likely to use the car than those living in the city. An interesting question that occurred early on in the field work was whether or not parents considered the implications that home location had on transport. The responses parents had were of interest. While a small set of parents did say they made a conscious choice to live in a more urban setting to reduce travel demands, the majority responded that transport was not as important as other factors, such as personal green space, home size, and safety for the children.

Day care locations also impacted the way participants travelled. This had to do with the distances the day care was located from the home and work place. Those living outside of walking distance from the day care, a distance of more than 1 km, almost always reported driving. On the other hand, day cares located within walking distance to the home changed the way participants travelled as they could drop with more ease and continue on travelling alone.

Work place day cares impacted travel in another way. Because the day care was located next to the work place and not in the area surrounding the home, families were less likely to live within close proximity. Parents traveled from all over Oslo and beyond to deliver children at the day care and report to work. Because many of these parents were travelling longer distances with children, the car was frequently chosen. These participants were those likely to express the care and family time which occurred during travel. It is an interesting aspect of the work place day cares, that even though they may simplify travel routines, they will not necessarily reduce automobile use. Both work place day cares and those within walking distance to the home greatly simplify daily travel for families, however each in its own way. The day care least convenient is one located neither within walking distance from home, nor at the work place. While this is a topic of much personal interest, data from this research is limited. This is an area which deserves more attention.

Car use outside of the triangle, to arrive at activities after work hours and to travel on the weekends, showed to be more frequent than inside. This was a very surprising find. This information shows that it is not only the hurried travel times taking place in the morning and afternoon weekday rush which attracts people to the automobile. In fact, use was so prevalent outside the triangle that it appears that desire for a certain lifestyle, instead of weekly time constraints, etc. was a more influential factor when it came to automobile purchases and use. Once again, this confirms the necessity to observe transport mode choice on a larger scale and not only at the micro level of trips during weekday rush hours. Whereas this was the result from this research, I suggest further investigations in this area, focusing on an expanded sample set.

Environmental education campaigns did not impact how parents travel. Finding any sort of correlation between environmental advertising and stewardship by citizens was a part of my study. This research suggests that while these campaigns do raise awareness of green house gas emissions and other global and local impacts, they do not necessarily change people's travel habits. Parents in

my sample indicated that their travel decisions were mainly based on other criteria. As mentioned for day care location, this is another area which could have been researched in more detail with the proper time and resources.

The desire for a yard, green space, and safe environment for children was a common justification for those parents who had decided to increase the distances they lived from other key locations. People from different areas and economic classes described a similar movement out of the city. One possible move by policy makers might be to work to improve the green areas, cleanliness, and safety of the city to attract parents back from the outer areas. Having more families living closer to the urban core could have an impact of reducing the number of cars being used today to travel the greater distances.

Another suggestion for policy makers is to improve the conditions for parents on both the bus and tram. Parents travelling with children, especially those with strollers, require additional space on the public transportation. One option could be designated carriages or areas on the public transport that only parents travelling with children would be able to use. A further idea could be rapid shuttle services for parents who have dropped off children at the day care. These shuttles could pick up multiple parents to transport them downtown or other work areas. High speed parental shuttles could be partially financed with the money these people were saving in petrol and tolls from less driving.

It should also be a goal of local government to place as many day cares close to people's homes as possible. This would result in more parents walking to drop off their children, and then having the freedom to choose their transport mode only for themselves.

The goal of environmental campaigns should not be to influence how one travels, but rather to educate citizens on the impacts of travel choice. Despite all of the campaigns sponsored by government, the information coming from the media, and hype centered around global warming and its cause, people did not indicate concern for the natural environment as a major factor in their decision making

process. This research suggests that environment campaigns do work to educate, but not to influence travel behavior. If the goal is to impact how people move about, then the suggestion is for the strategy to change.

There is no existing option today that provides more overall convenience and flexibility than the automobile. Therefore, the most effective suggestion arising from this research is actually best directed at citizens. If humans are to reduce the amount of pollution coming from transport, the change will have to come not only at the policy or institutional level but also from the individual.

As this research has shown, it is not simply the rush hour queues and time constraints which have parents choosing to use the car. Instead, it can be seen more as a way of life. People's desire for maximum flexibility and freedom when it comes to transport, leads many to choose the automobile once they have achieved financial capability. The fact that participants in this research were more likely to indicate car use on trips outside of the work and school hours illustrate even our hobbies and holiday schedules requiring use of the car.

Policy changes can have an impact. However, for a significant and sustainable transformation to occur, citizens must take personal responsibility for how they travel. We must search for ways to change existing value structures, away from a market driven lifestyle of constant growth and movement, to one where people are more satisfied to live locally. There is need for a new set of cultural values, where it is not necessary or even accepted to travel hours in the car every weekend, only to get out of town or shop at mega stores one cannot reach during weekdays. It is when citizens accept new and more environmentally sustainable values, coupled with a major technological fix, that we see a significant reduction in environmental impacts from transport.

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803.

List of participants

| Participant | Day Care | # children | Gender | Age | Civil Status |
|-------------|--------------|------------|--------|-----|--------------|
| 1 | NRK | 2 | M | 31 | Co habit |
| 2 | NRK | 2 | W | 36 | Co habit |
| 3 | NRK | 2 | W | 41 | Co habit |
| 4 | NRK | 2 | M | 44 | Co habit |
| 5 | NRK | 2 | W | 35 | Co habit |
| 6 | NRK | 3 | M | 44 | Married |
| 7 | NRK | 3 | M | 43 | Married |
| 8 | NRK | 2 | M | 33 | Co habit |
| 9 | NRK | 1 | W | 44 | Co habit |
| 10 | NRK | 1 | M | 52 | Co habit |
| 11 | NRK | 2 | M | 43 | Married |
| 12 | NRK | 1 | W | 36 | Co habit |
| 13 | Vier | 2 | W | 36 | Co habit |
| 14 | Vier | 2 | W | 36 | Married |
| 15 | Vier | 3 | W | | Married |
| 16 | Vier | 3 | M | 43 | Married |
| 17 | Sinsenparken | 1 | M | 31 | Single |
| 18 | Sinsenparken | 1 | W | 31 | Co habit |
| 19 | Sinsenparken | 2 | W | 33 | Married |
| 20 | Sinsenparken | 1 | W | 31 | Married |
| 21 | Other | 3 | W | 39 | Married |
| 22 | Other | 2 | M | 35 | Married |
| 23 | NRK | 2 | W | 43 | Married |
| 24 | Sinsenparken | 1 | M | | Co habit |

Letter examples

Kjære Sinsenparken Barnehage,

Jeg heter Scott Miller og er masterstudent ved senter for utvikling og miljø, universitet i Oslo.

Snart skal jeg starte med undersøkelser/forskning til min masteroppgave. Hovedspørsmålet mitt fokuserer på hvordan og hvorfor småbarnsfamilier velger et transportmiddel fremfor et annet i hverdagen. Jeg vil veldig gjerne snakke både med foreldrene som bruker bilen til daglig og de som pleier å bruke offentlig kommunikasjon, går eller sykler.

For å samle inn nok informasjon for oppgaven, kommer jeg til å organisere intervjuer med foreldre i fire forskjellige barnehager rundt i Oslo (16 familier totalt).

Jeg skriver for å spørre om hjelp til å finne foreldre som kanskje kan delta på intervjuer. I tillegg har jeg skrevet et brev til foreldrene som er vedlagt. Hvis dere vil lese mer om oppgaven min kan jeg sende et kort sammendrag om hva den handler om.

Jeg vil organisere et eventuelt møte med foreldrene når det passer best for dem. Dette kan være i bringe/hente-situasjon i barnehagen eller et annet sted som passer bedre.

Hvis dere har spørsmål kan dere ringe meg eller sende en e-post.

Med vennlig hilsen,

Scott Miller
Masterstudent UiO
Mob: 483 576 09
E-post: t.scott.miller@gmail.com

Kjære foreldre,

Jeg heter Scott Miller og er masterstudent ved senter for utvikling og miljø, universitet i Oslo.

Snart skal jeg starte med undersøkelser/forskning til min masteroppgave.

Hovedspørsmålet mitt fokuserer på hvor vanskelig det er for småbarnsforeldre å leve uten bil når det handler om å rekke alle de daglige oppgaver. Jeg vil veldig gjerne snakke både med foreldrene som bruker bilen til daglig og de som pleier å bruke offentlig kommunikasjon, går eller sykler. Målet mitt er å forstå mer om hvorfor småbarnsforeldre velger en type transport fremfor en annen.

For å samle inn nok informasjon for oppgaven, kommer jeg til å organisere intervjuer med foreldre i 4 forskjellige barnehager rundt i Oslo (12 familier i total).

Jeg ønsker å komme i kontakt med foreldre som har barn i barnehage, og jeg lurar på om du, din ektefelle eller noen du kjenner godt ville være interessert i å hjelpe meg med mine undersøkelser/forskning.

Send Bente en e-post at du ønsker å delta.

Jeg vil gjerne organisere et eventuelt møte når det passer best for deg/dere. Dette kan være i bringe/hente situasjon i barnehagen, eller et annet sted som passer godt.

Hvis mulig, vil jeg starte med mine undersøkelser 27. september 2010 i Vier.

Hvis dere har spørsmål kan dere ringe meg eller sende en e-post.

Med vennlig hilsen,

Scott Miller
Masterstudent UiO
Mob: 483 576 09
E-post: t.scott.miller@gmail.com

Interview Guide English

Interview guide: Car, walk, cycle, public transport: (English translation)

To begin I would like to say thank you for your participation in this interview.

The goal of these interviews is to gain a deeper understanding of how and why the parents of small children choose a type of transport in their everyday lives.

I will make sure that all information discussed during this interview is fully anonymous, such that no name is mentioned in the written drafts of the research.

Socio-demographic information: To begin I have a few short questions

| Marital Status | # of Children | Profession | Home location | # of Cars | Main transport choice | Household yearly income |
|-----------------------|----------------------|-------------------|----------------------|------------------|------------------------------|--------------------------------|
| | | | | | | |

1. To understand the transport choice of parents with small children.

- What type of transport do you use most? And if you use more – which one?
 - Why do you use this type of transport?
 - Could you give a detailed explanation of how you use the different transport modes during a day, from morning until evening, both weekdays and weekends?
 - Who are you with?
 - How much time does the trip take?
 - How do you experience the trip?
 - Where are you travelling to?
-

- If you drive a car: What would be the reason for you not choosing another type of transportation? Both on weekdays and on weekends.
 - Is it easier or more practical to drive a car?
 - Are the distances too long to bike or walk?
 - Are the public transport offerings not good enough?
-

- If you use the public transportation, walk, or cycle: Why do you choose this?
 - Are you against automobile use?
 - Is it cheaper?
 - Is it faster?
 - Do you consider these modes as forms of exercise?
-

- Is there a historical reason as to why you choose a particular transport mode? An experience in your childhood?
 - Stroller on the bus
 - Challengin economics situation in childhood – parents did not have a car?

2. How are the different transport modes experienced and viewed? (G. Beirão, J.A. Sarsfield Cabral):

How do you experience the different transport modes?

What's your opinion on the transport mode you use most, and also on the different available transport modes available in Oslo/Bærum areas?

- If you drive a car: What is your general opinion of car use?
 - Is it practical, or is it necessary?
 - What do you like/dislike about the roads in Oslo?
 - How do you experience a trip in the car?
 - How do you feel when you drive?
- If you drive a car: What's your opinion on public transport/bicycle/sidewalks?
 - Are cyclists in the way? Is it too dangerous to cycle?
 - Is the bus overly full? Do the buses depart often enough?
Pickpockets?
 - Is it difficult with small children to cycle/take the bus/metro?

-
- If you **bicycle / walk**: How do you feel about in general about using a bicycle or walking as a mode of transport?
 - Is it practical?
 - What do you like/don't like about the bike paths and sidewalks in Oslo?
 - How you experience travelling on a bike?
 - How do you feel when you bicycle/walk?
 - If you **bicycle / walk**: What do you think about those who drive cars?
 - Is it the less environmentally friendly option? Do bikers take consideration of others?
 - What do you like/don't like with the roads in Oslo?
 - If you **bicycle /walk**: What's your opinion on public transport in Oslo?
-

- If you use public transport: What is your general opinion on the service in Oslo and surroundings?
 - Is it a practical option? Is it faster than other options?
 - Positive and negative sides?
- If you use public transport: What do you think about car use and cycling?
 - Is it practice?
 - Positive and negative sides?

3. Dependence & Options to choose

Explain what the options/choices parents of small children have in general when it comes to transport in and around the Oslo area. Do parents actually have a choice on the transport they use?

Do you feel that you and your family have the ability to choose a different mode of transport than you use now?

If you do not feel you have other real options other than the mode you use now, why?

- Is it problematic time wise, infrastructure problems, too long distances, etc. (Sanne, 2002 Ecological Economics)

Do you feel or have you felt lock-in to a particular mode of transport?

How would the choice of a different type of transport influence your daily routines?

4. Environment

Does concern for the environment factor into how you choose a type of transport?

Are there other factors that play a role in your decision? (Congestion, noise, weather, time)

5. General

If you could do something to improve the transport situation in Oslo/Bærum – what would it be?

(Less expensive gasoline, more bicycle paths, better public transport service, more day cares in close proximity to home and work, etc.)

How has local transportation changed since you were younger? (Were you driven to the day care, etc.)

Interview Guide Norwegian

Interview guide: Bil, Sykler, går, offentlig

På forhånd ønsker jeg å si tusen takk for din deltakelse på dette intervjuet.

Jeg ønsker med disse intervjuene å få en dypere forståelse av hvorfor og hvordan småbarnsfamilier velger transporttype i hverdagen.

Jeg vil også sørge for full anonymitet, slik at ingen navn blir nevnt i oppgaven min.

Socio-demographic information: Først har jeg noen korte spørsmål, så kan vi begynne

| Sivilstatus | Antall barn | Yrke | Bosted (hvor) | Antall biler | Transportvalg | Husstandens årlige inntekt (ca.) |
|-------------|-------------|------|---------------|--------------|---------------|----------------------------------|
| | | | | | | |

1. Å få forståelse av transportvalg for foreldre med små barn.

- Hva slags transportmiddel bruker du mest? Og eventuelt bruker du flere – hvilke?
- Hvorfor velger du dette transportmiddelet?
- Kan du forklare detaljert hvordan du bruker forskjellige transportmidler i løpet av en dag, fra morgen til kveld, både ukedager og i helgen.
 - Hvem er du med?
 - Hvor lang tid tar turene?
 - Hvordan opplever du reisen?
 - Hvor drar du?

-
- Hvis du kjører bil: Hva må til for at du velger andre måter å reise på? Både hverdager og helger.

- Er det lettere/mer praktisk å kjøre bil?
 - Er det for lange avstander for å gå/sykle?
 - Er tilbudet om offentlig kommunikasjon for dårlig?
-

- Hvis du bruker offentlig kommunikasjon, går, sykler: Hvorfor velger du dette?
 - Er du mot bilbruk?
 - Er det billigere?
 - Går det raskere?
 - Er det en form for trening?
-

- Er det en "historisk" grunn til at du velger et spesielt transportmiddel? Opplevelse i barndommen/da man var ung f.eks.?
 - barnevogn på bussen
 - dårlig økonomi i barndommen – foreldre hadde ikke råd til bil.

2. Hvordan blir ulike transporttyper oppfattet og vurdert? (G. Beirão, J.A. Sarsfield Cabral):

Hvordan oppfatter du andre transportmidler?

Hva tenker du om det transportmidlet du bruker mest, og hva tenker du om andre mulige transportmidler i Oslo/Bærum?

- Hvis du **kjører bil**: Hva tenker du generelt om bilbruk?
 - Er det praktisk, eller er det nødvendig?
 - Hva liker/misliker med veiene i Oslo?
 - Hvordan opplever du en biltur?
 - Hva føler du når du kjører?
 - Hvis du **kjører bil**: Hva tenker du om offentlig kommunikasjon/syssel/fortauer?
 - Er sykklister i veien? Er det for farlig å sykle?
 - Er bussen for full? Går bussen ofte nok? Er det lommetyver?
 - Er det vanskelig med små barn å sykle/ta buss/t-bane?
-

- Hvis du **sykler / går**: Hva tenker du generelt om sykkel / beina som transportmiddel?
 - Er det praktisk?
 - Hva liker/misliker med sykkelveiene eller fortauer i Oslo?
 - Hvordan opplever du en sykkel tur eller en tur?
 - Hva føler du når du sykler / går
- Hvis du **sykler / går**: Hva tenker du om de som kjører bil?
 - Er det lite miljøvennlig? Tar bilister lite hensyn?
 - Hva liker/misliker med veiene i Oslo?
- Hvis du **sykler /går**: Hva tenker du om offentlig kommunikasjon?

- Hvis du tar **offentlig kommunikasjon**: Hva tenker du generelt om tilbudet i Oslo?
 - Er det praktisk? Går det raskere?
 - Positive og negative sider.
- Hvis du tar **offentlig kommunikasjon**: Hva tenker du om bilbruk/sykkel?
 - Er det praktisk?
 - Positive og negative sider.

3. Avhengighet og valgmuligheter

Forklar hva slags valg småbarnsfamilier generelt har når det kommer til transport i Oslo/Bærum-området. Har man egentlig et valg?

Føler du at du og familien har mulighet til å velge andre transportmidler enn det du nå gjør?

Hvis du ikke føler at du har andre reelle muligheter enn det transportmidlet du nå bruker, hvorfor?

- Tidsmessig problematisk, infrastruktur, lange avstander osv. (Sanne, 2002 Ecological Economics)

Føler du/har du følt at du er ”låst” til et spesielt transportmiddel?

Hvordan vil valg av en annen type transport påvirke de daglige rutine?

4. Miljø

Spiller miljø inn som en faktor ved valg av transportmiddel?

Er det andre faktorer som spiller inn ved valget av transportmiddel? (trafikkork, støy, vær, tid)

5. Generelt

Hvis du kunne gjøre noe for å forbedre transportsituasjonen i Oslo/Bærum – hva ville det være?

(Billigere bensin, flere sykkelveier, bedre offentlig kommunikasjon, flere barnehager i nærmiljøet osv.)

Hvordan har transportmåter forandret seg siden du var liten? (Ble du kjørt til barnehagen, osv.)

En vanlig ukedag - Reisedagbok

| | |
|-----------------------------|--|
| Kjønn | <input type="checkbox"/> Mann <input type="checkbox"/> Kvinne |
| Alder: | |
| Sivilstatus: | |
| Yrke: | |
| Husstandens årlige inntekt: | |
| Antall barn: | |
| Type transport: | <input type="checkbox"/> Bil <input type="checkbox"/> Offentlig komm. <input type="checkbox"/> Gå/sykle <input type="checkbox"/> En blanding |
| Annet: | |

Jeg ønsker at du nedenfor dokumenterer de ulike reisene du tar hver dag på en vanlig hverdag/arbeidsdag. Om du reiser bare en gang, fyller du ut bare den første "turen". Hvis du tar fire ulike reiser, korte eller lange, fyller du ut fire forskjellige "turer". Det er fint om du fyller ut skjemaet så nøyaktig som mulig. Ta gjerne med deg skjemaet den dagen du skal skrive om :)

Tur 1

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Tur 2

| | |
|---|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Reisedagbok - lørdag

Tur 1

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Tur 2

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Tur 3

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Reisedagbok - søndag

Tur 1

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Tur 2

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |

Tur 3

| | |
|--|--|
| Når i døgnet reiser du? | |
| Hvor lang er reisen? (km og min) | |
| Med hvem reiser du? | |
| Hvordan og hvorfor reiser du? | |
| Opplevelse av reisen: Hvordan opplevde du/dere reisen? Hva føler du når du reiser med denne typen transportmiddel? Hva liker/misliker du med dette transportmiddelet? Andre opplysninger? | |