Denne artikel er udgivet i det elektroniske tidsskrift
Artikler fra Trafikdage på Aalborg Universitet
(Proceedings from the Annual Transport Conference at Aalborg University)
ISSN 1603-9696
https://journals.aau.dk/index.php/td

trafikdage
NY VIDEN & NETVÆRK

Transitions of Mobilities in Rural Areas?

Oliver J. Mathiasen, omathi17@student.aau.dk
Master Thesis

Abstract

This project aims to contribute to the field of sustain mobility in rural areas. Where rural areas traditionally have been embossed by an individual car-based automobility, this project focus to investigate how the city of Lihme can transform into a more sustainable mobility future. By using the 'Motility' framework by (Kaufmann, Bergman, & Joye, 2004), and including the citizens from Lihme through a survey, it has enabled this project to research Lihme within the science of 'Mobilities Turn'. This science evolves mobility, as something more than just going from A to B compared to more conventional way of approach the science of mobility, that focuses more upon the physical structures.

This project is designed in a both qualitative and quantitative research style, as it uses a survey as the main methodological approach, where the respondents were allowed to elaborate on their reasoning and mobility behavior. Furthermore, the project is done using the hermeneutic philosophy of science, as the analysis is structured by the theoretical approach by analyzing through interpretations and understandings.

The project shows, that there is a great usage of the car as a main mode of transportation for everyday commuting in Lihme. This is mainly caused by the culture, but also there are identified to many limitations for using other alternative mobilities, such as infrequent schedules and coverage for the existing public transport. However, there is a recognition from the citizens in Lihme, that there are other mobilities, that can improve the current mobility situation in Lihme.

This project identifies four different 'Ideal Types', distinguished by their 'Potential to be Mobile' and 'Adaption Level'. These ideal types represent different groups of individuals and their factors for 'Mobility Coping Strategies'. Thus, these identified ideal types enable planners to select mobilities that fits into what is wanted by citizens living at the certain area. Furthermore, this identification shows, that when individuals are switching between life spaces, there are created 'Transition Stages' where individuals are more open and exposed to be transformed into more sustainable mobilities.

The project concludes that it is possible to transform individual and car-based mobility into sustainable mobility if the citizens are being included. This means, that implementations of new mobilities need to be suitable for the demands the citizens might have, as they themselves as citizens constitute the solution for transforming.

Introduction

The aim of this project is to investigate how the city of Lihme can transform into a sustainable mobility future. Hence, the geographical boundary of this project is confined to Lihme. With its remote located placement in the west of Skive, Lihme is a city that experiences a heavily car-based automobility. Furthermore, Lihme is a community with **an** over-represented older demographic distribution. Hence, a majority of the citizens in Lihme, are not as mobile as they used to be. Thus, the goal of this project is to constitute recommendations, that can transform Lihme from being this one-sided mobility community to a community focus on sustainable mobilities, that can accommodate current and future generations to be mobile.

The background of this project is concerned by the increasing urbanization, where more and more people are moving into the greater cities in Denmark. A tendency that also occurs as well in the rest of the world (Castells, 1996). This has caused that more people are living in urban areas, hence fewer people are living in rural areas. The urban places can in this context be identified as dynamic and proactive places, which makes it attractive for especially younger families to settle. Through the decrease of people living in rural places, a connection can be observed between the places and their related mobilities. The global competition and the general compression of time and space, as such (Massey, 1994) touches upon, means that the location of new activities is more concentrated around the greater metropolises. This creates an effect, where the exclusion of place might make immobile places even more immobile (Massey, 1994). These dynamics constitute a transition, where place management of new activities such as infrastructural investments are more likely to be placed around greater metropolises, which opens a reflection of how rural places can attract the activity, that might be needed in transform the mobility culture into a more sustainable mobility culture - and to be connected to existing flows, and hence attract mobilities (Dicken, 2015). The rural mobility culture is heavily car-based, and this creates a situation, where the people are facing difficulties from the moment, they cannot maintain the usage of the car as the main mode of transportation.

As (Sheller, 2004) states, using the car as mode of transportation is very much affected by the geographical and societal factors. Hence, this project concerns on how the societal factors in Lihme can be changed, so the citizens in future scenarios can be more mobile, compared to the current mobility in rural areas, where immobile individuals possess a great dependency on relations such as family, or to a last extend needs to order a taxi. The immobility constitutes a society, where people cannot attend to activities, they might want to participate in.

Lihme is thus an interesting case overall, as the city has been affected by these global dynamics, where the city might seem to have been excluded from greater corridors between the bigger metropolises. In the future, Lihme might confront a mobility transition, as the current mobility situation is not sustainable and attractive for other people. Thus, it is interesting to investigate how a city like Lihme can transform into a sustainable mobility situation. This will be investigated with the use of a hermeneutic philosophy of science approach, with the main theoretical framework by the work of Kaufmann and his notion of 'Motility'. This will be used to answer the research question of this project: “Is it possible to transform the mobility of rural areas from the conventional and individual-based automobility into more sustainable forms of mobilities for the people living there?"

Background and Methods

Theoretical Framework

To investigate the field of investigation of this project, concerning of how to transform the mobility into more sustainable mobilities in Lihme, it is necessary to display a theoretical framework, that can make the foundation for the investigation of this mobility field. Hence, the theoretical framework should be understood as the frame within this project is being researched. The theoretical framework will be operationalized in the end, to summarize how the framework is used to do the research of this project. The theoretical framework is mainly based on the potential of mobilities in Lihme, by applying the theoretical framework of

'Motility' by (Kaufmann, Bergman, & Joye, 2004). This is used to understand, the tendencies of actual used mobilities in Lihme, but also to understand the perception from the citizens of the different mobilities. Furthermore, as supplement to understand the field of investigation and further elaborate on the different mobilities, the mobility term and the different forms of mobility is introduced by (Urry & Sheller, 2006).

The 'Motility' framework is to be considered as the main theory of this project, as it enables to research, how people create a potential to be mobile and how they transform this. Thus, the theory does not only investigate how people move, but also clarifies how they could be affected to transform their motility into more sustainable forms of mobility.

The theoretical framework of this project should be considered within the 'Mobilities Turn'. The field of the 'Mobilities Turn' can be identified as contradictory to the more conventional way of thinking transport. Thus the 'Mobilities Turn' consider movement as something more than going 'A to B' and hence emphasizes the social aspects of mobility further, than in conventional way of thinking mobility (Urry & Sheller, 2006).

Five Forms of Mobility

In (Urry & Sheller, 2006) it is described how social science has left out the importance that mobility provides for the social space in communities. Mobility constitutes as bigger and more complex network than just transport itself, that is more dynamic and facilitate everything about the travel from A to B, and not just the travel itself. Mobility constitutes, what people opportunities to move around are, and how it is explored. As several analysis through (Urry & Sheller, 2006) show, travelling is not just to go from A to B as quickly as possible, but every time we travel, new knowledge and experiences are gained. Hence, mobility deals with a complex system of flows and forms of transportation, that cannot always be separated, but is essential for the connections in a society. This connection can both be of physical nature such as infrastructure and accessible forms of mobility, but it can also be virtual such as through online technologies (Urry & Sheller, 2006). As mentioned in (Urry & Sheller, 2006), mobility reflects a resource, that is uneven distributed. This due to places are not the same, and they can be affected by changing the flows at a place, and thereby change on the characteristics of a place. According to (Urry & Sheller, 2006) the exclusion of the social dimensions in conventional social science has left out has created a new mobility paradigm. This is mostly regarding the importance of understanding how mobility facilitates a lot of social dimensions, as well of offering mobility services and being more mobile. Hence, to achieve a greater understanding of mobility, John Urry introduces five forms of mobility in (Dickinson & Lumsdon, 2010). These five forms of mobility are:

- Mobility of objects
- Corporeal mobility
- Imaginative mobility
- Virtual mobility
- Communicative mobility

Thus, the knowledge of (Urry & Sheller, 2006) contributes with, how mobility interacts in today's society. Every single form of mobility lasts their social dimensions, which focus on the solutions toward some of the mobility limitations, that exists. The different forms of mobility by John Urry are taking into considerations of this project, as they consist of a relatable understanding of mobility as a term and is relevant to include toward improving the mobilities of a given place, which in this case is Lihme.

Motility – Mobility as a Capital

As it has been elaborated during, there occur a great potential of improving the mobility situation in Lihme. Hence, the theoretical framework also includes a main theory, that can understand the dynamics and factors, that holds Lihme from utilizing their potential. Specifically, potential is main point that (Kaufmann, Bergman, & Joye, 2004) introduces, to understand how the 'Motility' framework can be adapted into a

physical form of mobility. However, this framework by Vincent Kaufmann concerns the actual users and everyday commuters and their potential to be mobile. (Kaufmann, Bergman, & Joye, 2004) emphasize the importance of focusing on the contextual interactions and the potential possibilities and constraints of movements, rather than the more conventional mobility regime focusing on the space and time relations.

As already touched upon the framework of 'Motility' investigates the potentials mobility. Vincent Kaufmann introduced the term of 'Motility' as he was critical toward anticipating mobility as something too conventional and traffic orientated and not considering the social constructions the mobility also consists of such as power relations, demography's, and the capabilities of moving across geographical spaces. Hence, (Kaufmann, Bergman, & Joye, 2004) identify a connection between social and spatial aspects of mobility. Thus, the framework does not only consider movement, but also identifies where there is a potential for movement to be utilized into becoming mobility. Hence, this depends on the socio-spatial context. To understand and utilize the framework of 'Motility', (Kaufmann, Bergman, & Joye, 2004) introduce three parameters, that needs to consider to fully acknowledge the potential mobility. These three parameters are defined as 'Access', 'Competence' and 'Appropriation'. For all these parameters there exists an interdependency, as mentioned previously. The parameter of 'Competence' can be determining for 'Access', as for instance if an individual cannot acquire a driver's license, the individual is not legally allowed to access a car as a driver.

Methods

This chapter outlines the association between the findings of these two aforesaid Chapters Introduction and Theoretical Framework, concise to the methodological approach of this project. Based on the theoretical framework by Vincent Kaufmann, which is the main theory of this project, it is decided to apply methodologies that enable a great extent of interpretations. Thus, this means that the research design of this project is within an interpretative-oriented philosophy of science approach.

Survey

For this project the data was collected through a survey to outline different actions and opinions from the citizens of Lihme. The advantage of choosing survey as the mail method is the easy accessibility of sharing it to get as many answers as possible. Furthermore, the survey was available and accessible online, so the respondents had the opportunity to select their preferred surroundings while answering it. The survey was made to get as much information about the mobility situation in Lihme "from below"-perspective, meaning the inputs from citizens living in the area, as they can be considered as the main experts of the everyday practices in Lihme (Brinkmann, 2014).

The accessibility of a survey increases it potential of getting many answers, which can be used broadly to cover the mobility situation in Lihme. This makes it possible to achieve a broad understanding of the mobility patterns occurring in the everyday lives in Lihme. Furthermore, it activates the respondents to reflect on their mobility patterns, and to start their minds of how the mobility could be improved. The survey was mainly constructed with pre-selected options; however, the respondents always had the opportunity to notice if some option was missing and to elaborate on their answers. A survey is mainly identified as a quantitative method to collect many answers, however, this survey allowed the respondents to elaborate on their answers to get some qualitative reflections.

Literature Review

The literature review has been conducted to collect already existing information and knowledge. This method contributes to a broader understanding of this specific topic, this project is about. In this project, the literature review has been conducted to achieve knowledge about comparable cases.

The literature used during this project has been accessed through searching online through portals such as Google and AAU Library. Furthermore, relevant literature has been accessed through the method of 'Snowball sampling', which basically is literature referring to new literature. So, for instance, while reading relevant literature or talking to relevant person there might be referred to new literature that might be relevant or might open new doors toward un-identified subjects of this project. The collection of literature has been done inductive throughout the project.

Beside literature that is used to investigate comparable cases such as the case of Lihme, there has also been used literature to underpin the findings of this project, or to support argument during the analysis. These can be statistical data, municipal reports, etc.

Analysis of Data

The analysis will be structured by the main theoretical framework of 'Motility' by Kaufmann as introduced during theory. The analysis is structured after the 'Motility' framework, as it enables the research of people's transport choices, and how it can be improved to accommodate into a sustainable transition. During 'Motility' it was outlined, that Kaufmann has three parameters that needs to be answered, to investigate the 'Motility'. Thus, this analysis will be structured by the three parameters of 'Access', 'Competence', and 'Appropriation', as mentioned during the theory. To do so, the inclusion of the survey, as elaborated in the Methods, will be applied by using statistics and citation from the respondents. This relates to methodological considerations regarding applying a hermeneutic approach,

From analysis of the 'Access'-parameter of the framework by Kaufmann, it can be stated, that the people in Lihme are depending on the opportunities to access other, especially bigger cities. This is caused by the missing functions, that are Lihme, so all demographic age group have different reasonings of going to other cities, whether it is regarding school and education, work, health care and so on. To access those other cities, a great majority of the people living in Lihme are mainly using the car as their main mode of transport for everyday commuting. This mainly because, the alternatives of using other modes of transportation are non-satisfying in regard of their demands and schedules. The existing network of public transport has a great connection to the city of Skive, however, you also need to go there, to reach other cities. This makes it time consuming to live in Lihme, and to have chores in some of the other bigger cities such as Struer and Holstebro. Furthermore, the frequency of public transport in Lihme might affect the decision-making of mobility forms to a great extent, as it does not seem optimal regarding the flexibility, the people in Lihme are valuating highly. In regard of the socio-economic aspects of the people living in Lihme, it can be led, that Lihme is widely represented from higher to lower yearly incomes. However, a great majority own a car. Thus, it can be argued, that the mobility solution is of great importance for the people in Lihme, if it provides the most optimized solution for them.

This will focus on the parameter regarding 'Competence' of the Motility-framework. As mentioned, there are three important aspects when focusing on the parameter of 'Competence', who are:

- The physical skills
- The acquired skills
- Organizational skills

These three aspects will also influence the order of how this section is structured. Hence, this section will be divided into the three aspects.

The physical skills of the people in Lihme are important. Already of now, it can be identified, that there are problems toward being physically challenged in Lihme, as they walking paths are not made for assistive devices such as a walker. Furthermore, it might also be difficult to use the public transport, shown be the bus line in Lihme, as it is difficult to bring assistive devices. It can be expected that physical skills of the citizens in Lihme might not be better soon, due to their demographic distribution, characterized by elderly people.

Regarding the acquired skills, it can be said, that the ones who cannot acquire or possess a driver's license becomes more vulnerable regarding their mobility in a city like Lihme. Furthermore, there is not talked much about other mobilities rather than more conventional forms of transportation such as using the car or public transport. This might outline a lack of technological adaption, where there might be technological driven mobilities that can improve the mobility situation in Lihme.

The skill of being able to be 'Organizational' makes a great impact on the different mobility offers an individual can counter. However, it needs to be easy to organize it, as the most citizens in Lihme are used to freely way of living with a car. Hence, there might not be culture of organizing an everyday mobility life. One of the main arguments from the citizens are, that there needs to be clarity about when it is possible to go from A to B.

This last and third section of the analysis focus on the parameter of 'Appropriation' by the framework of Kaufmann. This parameter describes the considerations of the mobility agents, meaning the users and citizens of Lihme, and their individual mobility options concerning the already described parameters of 'Access' and 'Competences', affected by meanings such as aspirations, habit, needs and values.

Discussion and Conclusion

To answer this main research question and its three relating sub-questions, the 'Motility' framework by Kaufmann was chosen as the main theory, as it does not only focus on the physical mobilities, but also research people's mobility choices, which are necessary to understand how a more sustainable mobility future can be accommodated. Furthermore, an in-depth survey acts as the main methodological approach, as it includes the citizens of Lihme, and gives both a qualitative and quantitative expression of Lihme. Furthermore, the theoretical findings of 'Mobility Coping Strategies' by (Jensen & Lassen, 2004) and the concept of 'Value of Time' by (Wardman & Lyons, 2016), as they enable to achieve a greater understanding of peoples mobility behavior.

To answer the main research question of this project, there will firstly be an answering of the first sub-question. This sub-question was as followed: Which mobilities are present in Lihme, and which can be identified as the primary used? This sub-question aims to determine the current mobilities that already exists in Lihme, and which mobilities that are the most used by the citizens. As it was stated during the Analysis, there are some accessible mobilities in Lihme, namely using the car or the public transport. Lihme is in a remote area, where the offers to be mobile cannot be expressed as multiple. However, there are some opportunities beside the car. The car is also the main mode of transportation in Lihme, as 90 % use the car for everyday commuting. Beside the car, it is possible to use the public transport, where there is a bus line to Skive operated by the traffic company of Midttrafik. The public transport in Lihme is used by 10 % from the survey this project for everyday commuting. Furthermore, it is possible to use the bicycle in Lihme, however, the infrastructure is not fully integrated toward a cycling infrastructure, as cyclists share their paths with the road. None of the respondents of this project were using the bicycle as their main mode of transportation, however, other surveys from the municipality, indicates that a small amount of people might use the bicycle as their main mode of transportation. Lastly, a carpooling company is operating in Lihme. However, it is on a very early stage, and is not used on an everyday basis by the citizens in Lihme.

Thus, the mobilities in Lihme can be identified to be a heavily car-based automobility, with a smaller share of the citizens using the public transport. Besides the offers for using carpooling, the bicycle or walk exist, but cannot be identified as an everyday commuting mobility by the citizens in Lihme.

In relation to the life changes that new mobilities may entail, the second sub-question is formulated to deal with respective challenges and opportunities that the citizens of Lihme themselves identify through various mobility services. Thus, the second sub-question is: How can the limitations and potentials of the different

identified mobilities be utilized? During 'Appropriation' it was examined how the citizens of Lihme identify different mobilities, to improve their mobility situation Here, the identifications was public transport, carpooling, own cars, and better cycling paths. The public transport is identified as a reliable mode of transport, that easy to schedule, as you always when it departs and arrives at different locations. The limitation of public transport is mainly the frequency and network, as it is not frequent in especially evenings and weekend, and furthermore it is only connected to Skive, whereas many people in Lihme are commuting to other cities such as Struer. Carpooling, on the other hand, was identified as a service, that could improve the mobility in Lihme. Mainly, as there already is so many cars, that drive around on an everyday basis. If these cars can be activated, the mobility network of Lihme can become improved, as it might offer the mobility across municipal borders, which is a current limitation for the existing public transport. The main limitation for carpooling, is the uncertainty there is regarding time schedules and destinations, as people live dynamic lives, and hence carpooling is driven by the people, the schedules might change, which make it uncertain as a main mode of transportation. By driving in own cars there is a great flexibility for the users. However, it is also a priority as it is a relative expensive mobility to use on an everyday basis. The car, however, is a part of the problem, that amplifier the uncertainty for other mobilities, as it consumes such a great majority of the people, and hence the user foundation for alternative mobilities. Using the bicycle is more difficult, as the infrastructure for it is not satisfying enough. As of now, there is not a bicycle infrastructure, which challenges the safety concerns for the bicycle of being an everyday mobility. Furthermore, with people living hectic and dynamic lives, the bicycle might not be satisfying for everyday tasks. However, there might be a great potential in electric bicycles, which can provide faster speeds and carry more goods along.

Hence, the public transport is great for people, as it easier to schedule. However, there is a lack regarding coverage and frequency. This lack of coverage and frequency might be supplied by carpooling, with can extend the already existing network of mobility in Lihme. By activating the car-rides, that already occurs from Lihme, it can be expected to offer attractive routes and travel times to other cities. Using own cars provides a great mobility and flexibility for the users, however, it is expensive to use, and generally it contributes to the immobile individuals to become even more immobile, as cars consume such a great share of the mobilists in Lihme. Lastly, bicycle paths need an improvement in its infrastructure to become a more essential actor in Lihme. It can be expected, that if the infrastructure was improved, especially electric bikes could become a truly alternative to use for everyday commuting.

To include the findings that the mobility situation in Lihme has contributed with, a third sub-question was formulated. This sub-question includes the identified challenges and opportunities for real sustainable mobility planning in rural areas. This sub-question was made as follows: Which mobilities can be identified to transform Lihme into a more sustainable development regarding mobility, and how can the experiences contribute to future mobilizing management in other rural areas and villages?

For Lihme, it is of great importance to introduce alternative mobilities instead of the car. It was identified that there are different 'Ideal Types' in Lihme. These groups identify different type relating to a stage of life, and can be described as "Young People", "Young Grown-Ups", "Grown-Ups", and "Elderly People". By identifying these types, it has enabled the recommendations to fit into how the different 'Ideal Types' by valuating on their behavior by factors such as Value of Time, obligations, competences and so on. Through the identification of these 'Ideal Types', the mobilities of carpooling, home-offices, electric bicycles, and local village busses was identified as mobilities, that could improve the mobility situation in Lihme. These mobilities were identified through the 'Ideal Types', thus the mobility of carpool is recommended for "Younger People" as they are open for motives such as social relations and they possess technological skills. Home-offices was a mobility of virtual character that can improve the mobility for "Young Grown-Ups", as it releases some surplus, which can be used to try out other mobilities. Electric bicycles are recommended for "Grown-Ups" as it refers to a more active way of living, and might fit into their schedules, as they have more spare time available than previously. Local Village Busses is recommended for "Elderly People", as they struggle with disabilities, which make it difficult to use current mobilities. Thus, the local village busses

should be viewed as a pre-scheduled bus, that takes care of vulnerable individuals, and makes it possible for this group to get weekly rides for the bigger cities such as Skive. This enables them to visit such as doctors, hairdressers, or shopping.

The case of Lihme contributes with the important findings, that mobilities should be transformed for the people living there. The people must be included, as they constitute the solution of the mobility situation in Lihme. Furthermore, it is important to affect people during life stages. It is identified, that when people are going through transition stage from being one ideal type to another, there is an exposed stage to affect peoples' mobility strategies, which introduce and transform new mobilities into a society.

Overall, it can be concluded, that it is possible to transform the mobility situation from a conventional and individual-based automobility into sustainable mobility situation, so there exists a wider range of mobility opportunities for the individuals in a society. For this to work, the citizens motives need to be taken into consideration before decision-making 'from above', as the citizens in themselves constitute the key for transforming.

Regarding the project's initial thematization of being an individual-based automobility, an example of a city has thus been illustrated, who faces a redefinition if itself. The prospects of new mobilities will constitute a new transition for the city of Lihme from cars being the only truly option for being mobile, to a new mobility situation, where there exists a more dynamic mobility behavior. It should be mentioned, however, that the project and its conclusions are bound by its empirical findings. Thus, it is important, to reflect on both the project's method and what further studies can be carried out to supplement the findings of this project.

References

Brinkmann, S. (2014). *Unstructured and Semi-Structured Interviewing.* Oxford University Press, Incorporated.

Castells, M. (1996). *Rise of the Network Society: The Information Age: Economy, Society and Culture.* Blackwell Publishers, Inc.

Dicken, P. (2015). *Global Shift - Seventh Edition - Mapping the Changing Contours of the World Economy.* The Guilford Press.

Dickinson, J., & Lumsdon, L. (2010). *Slow Travel and Tourism.* Earthscan.

Jensen, O. B., & Lassen, C. (2004). Den globale bus: Om arbejdsrejsers betydning i hverdagslivet. *Arbejdssamfundet*, 241-280.

Kaufmann, V., Bergman, M. M., & Joye, D. (2004). Motility: Mobility as Capital. *International Journal of Urban and Regional Research*, 745-756.

Massey, D. (1994). *A Global Sense of Place*. Hentet fra http://aughty.org/pdf/global_sense_place.pdf

Sheller, M. (2004). Automotive Emotions: Feeling the Car. *Theory, culture and society*, 221-242.

Urry, J., & Sheller, M. (2006). The new mobilities paradigm. *Environment and Planning A*, 207-226.

Wardman, M., & Lyons, G. (2016). The digital revolution and worthwhile use of travel time: implications for appraisal and forecasting. *Transportation*, 507-530.