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CARGO BIKE POOL – A WAY TO FACILITATE A CAR-FREE LIFE?

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ABSTRACT
In planning for sustainable cities, there is a need to take into consideration alternative transportation modes and facilitate the use of these, for the types of trips that people tend to use cars for. One way to mitigate car dependency in everyday life could be by using a cargo bike for these types of trips. The purpose of this paper is to map in what ways a specific trial of providing access to a cargo bike pool in a housing association affected both people’s travel habits and how they reimagined the types of trips that could be done at all or done in another way in order to find car-free travel and transportation modes. In this paper we focussed on the residents who actually used the cargo bikes. This qualitative study shows that although many of the residents did indeed lead car-free everyday lives, they got the opportunity to do other types of trips that they had not even thought about beforehand or deemed too difficult to do without a car. The cargo bike proved to fit into the portfolio of sustainable travel modes that facilitate everyday transports. The way that trips are imagined has also changed, that is what a cargo bike can be used to in relation to car, regular bike and public transportation. Having access to a cargo bike through a vehicle pool means that the possibilities to live a car-free everyday life are facilitated and in the long run a sustainable transportation pattern is being put in place.

Keywords: cargo bike pool, mobility solution, behaviour change, sustainable transportation

1 INTRODUCTION
Alternative transportation modes have been argued to have large potential to contribute to sustainable urban development. This means not only an accessible city in the terms of walkability, being able to ride a bike or good access to public transport but, perhaps more importantly a city where day to day transports can be done without the necessity of a car. Examples of the types of trips that today might require a car are those trips where people need to transport either things or children or both from one place to another. There are certain trends such as peak car (the trend of declining car use in developed cities) [1, 2] and that young people tend to wait longer nowadays before getting a driving license in comparison to 20 years ago[3, 4]. But there is still an expectation from a societal perspective that encourages having a car and barriers in the city’s physical structure that hinder people from living a car-free life. If we are to be able to fulfil the targets set up to radically reduce GHG emissions and be able to mitigate climate change the role of the car in everyday life needs to be challenged fundamentally. This involves both city planning and the development of new mobility services. One such mobility service that enables a car-free life could be a cargo bike pool. In this paper we will look into a cargo bike pool trial that was made in a housing association in the south of the city of Stockholm, Sweden.

Cycling as a transportation mode has been put forward in Swedish policy documents and the government also stated in the goals for the Swedish Transport Administration that cycling is to increase its share of trips made, in order to meet the vision of a carbon neutral Sweden 2050 [5, 6]. It is however, not only climate arguments that are linked to the desire of increasing the share of bicycle trips but also arguments of accessibility, freedom of choice and health, as well to the image of the ‘good city’ [7]. The importance of policies in combination with infrastructural measures when it comes to encourage cycling is stressed by Pucher & Buehler [8] in their comparative study, whereas other studies have looked into the role life events could have on people’s willingness to taking up
biking [9, 10]. Yet other studies have looked into how the local context shapes the culture of cycling on different places and the importance of taking this into consideration in policy-making [11].

Cargo bikes or freight bikes have been around for almost as long as ordinary bikes and were used by shopkeepers to make local deliveries [12]. These kinds of bikes were also used by the postal offices and still are to some extent. Cargo bikes have become popular for private use over the past couple of decades; here the Netherlands and Denmark stand out, and main uses are transportation of children and goods. Since cargo bikes have not had the same breakthrough in Sweden as in Denmark, for example, the barrier towards purchasing one for private use might be higher as the cargo bike is considered to be a niche bike. There is also the issue of where to park it when living in apartment buildings as a cargo bike takes up more space than a regular bike. A way to get around both the cost and parking issues is to set up a vehicle pool, where you share the vehicles, in this case cargo bikes, with your neighbours.

The purpose of this paper is to analyse how having access to a cargo bike pool affect both people’s travel habits and how they reimagine the types of trips that could be done at all or done in another way in order to find car-free travel and transportation modes.

The aim of this paper is to explore how a mobility solution can contribute to change people’s everyday travel behaviour in an environmentally sustainable direction.

2 METHODOLOGY

In this study, we have used a variety of methods, but always with an ethnographic approach. By ethnographic approach we mean that we wanted to see how the cargo bikes have been used in this specific context. This means that we describe and try to understand what it means to be a cargo bike rider in Bagarmossen 2013 as fully as we can. How we interpret and analyse material will thus be dependent on the specific conditions in this time and place. We interviewed 12 residents, both those who had not used the bikes as well as those who have actually used the bikes. We aimed at getting an as wide spread of informants as possible, and we managed to find our informants in slightly different ways, both through a pre-survey that we distributed in the houses and through meeting residents when visiting the housing association. We have also been in Bagarmossen and made observations on several different occasions to further provide a basis for our understanding of how the cargo bike pool trial worked.

Our in-depth interviews were semi-structured; this means that even when we followed a question guide, to get what we wanted to find out, there was opportunity for us to follow up on what the informant was saying even though this was a bit outside of what was in the question guide. As part of the in-depth interview, we also asked the informants to fill out a one-day travel diary. The purpose of the travel diary was partly to estimate how and how much the informant travelled a day and also to able to relate the questions in the interview to the specific trips written down in the travel diary [13]. We also had access to the booking lists the residents had to fill out in order to borrow the cargo bikes and were thus able to see when the bikes used, how long and how many residents actually used them.

In this paper, however, we will focus on the residents that did use the bikes and their stories that we got from the interviews. We will in this paper use examples from the interviews to illustrate the way that the cargo bikes have been used and how some of the users have thought and reflected upon their usage.

In ethnographic research and analysis the point is not to let the empirical material falsify or verify a specific theory, but rather let the empirical material ‘talk’ to the theory, or as Pink & Morgan put it: “Ethnographic research evolves in dialog with theory rather than being led or structured by theory” [14:357]. The analytical process is an iterative where the data and the ideas are in a dialectical movement back and forth [15]. Thus we have analysed and interpreted the interviews in accordance with our anthropological and ethnological training and experience in order to find themes that are recurring and then tried to find reasonable theoretical arguments that are used as lenses to interpret our findings.

3 THE LOCATION OF THE TRIAL

The housing association is located in Bagarmossen, a city district in the south of Stockholm, and consists of 260 apartments in seven buildings. The association, which is one of the older housing cooperatives in Bagarmossen, has recently gone through a rejuvenation process and many younger people, both single and families with children have moved there. In addition to the rejuvenation
process, Bagarmossen, or at least parts of it, is also experiencing a gentrification process. Gentrification is a complex process that involves a change of residents and other land users in an area so that the new land users have higher socioeconomic status than the previous ones, while the built environment is altered by capital invested in the area [16]. In recent years, Bagarmossen has emerged as an increasingly attractive place to live, as the districts closest to the city centre have become increasingly expensive. Some of the reasons mentioned in the interviews that we have done are for example the proximity to nature, good communications, that they have friends living in the same area and that it is a safe area compared to other similar areas same distance from the inner city. The local context of a place impacts the way that cycling is perceived. Aldred and Jungnickel argue that “when everyone cycles, no one is ‘a cyclist’” [11:80] and this applies to the local cycle culture of Bagarmossen. Cycling is a natural part of the transport portfolio in Bagarmossen of both the cargo bike users and non-users that we interviewed.

4 RESULTS

4.1 Who used the bikes?

In common among the interviewees who used the bikes is that they were members of multi-person households. The interviewees all had children of different ages, however the most common was that they had children of school age or younger. Another common factor is that the interviewees in the interviews expressed a desire to live car-free lives. Most of the interviewees either had driving licenses or had a partner who had a driving license, but stated that they would prefer to manage their everyday transportation needs without a car as much as was possible. Many of the interviewees, though not all, were bike riders on a regular basis. Some biked to and from work, while others preferred to go by public transport.

A couple of our informants who also used the cargo bikes more often than average had had extensive discussions about acquiring cargo bike with their partners even before this project became known. Bill is such a person. Bill is 31 and has lived in the housing association for about 3 years. Bill is married to Olivia, 27, and together they have three children in the ages 3, 1 and a new-born baby. Bill started to work again in August after a period of parental leave. Bill rides his bike to and from work every day, a distance which is about 15 km there and back. Bill says that he had heard of cargo bikes before the project in his housing association. He mentions that there is a workshop nearby where they sell and make those kinds of bikes and that he and his wife had had their eyes on them for some time, discussing that ‘in a few years we'll do this investment’. One of the neighbours also has a cargo bike of their own but a different model than the ones in the trial.

Bill and Olivia come from a small city in northern Sweden and have had driving licenses since they were 18-19 years old, something that is almost a requirement in that region because of long distances and poor public transportation possibilities. During his parental leave Bill estimates that he has used the cargo bikes about three times a week. He was at home with their two children and also took care of a third child who was two years old. Taking care of three small children limits where you can go if you don’t have a car, but thanks to the cargo bikes Bill could do outings to different playgrounds in the local area. He has also used the cargo bikes for family outings like going to the lake.

For Bill the cargo bike pool has facilitated extremely much, and Olivia fills in that particularly the electric cargo bike has been very useful during her pregnancy when you don’t have your usual strength or are as fit as normally. They have good friends with car, which they are free to borrow at any time, but it is not always it feels right to take that alternative.

One trip that Bill mentions is when he went and fetched furniture at a second hand store located about 7, 5 km from their home. Bill says that his reasoning was, "I might as well take the bike instead of calling a friend [with a car]." He goes on and says that all journeys "this side of the city which have demanded cargo space, he has been able to do with a cargo bike. Bill says that the cargo bike has provided a sort of emotional space, a kind of freedom and accessibility that a car could give, but without the negative. According to Bill, the cargo bike pool is also a fun thing, a community thing: "If you see a neighbour with one of the cargo bikes you stop and chat, 'you're out with the bike, we are in this together.'"

The Bergman family consists of father, mother and two daughters 8 and 12 years. The family moved to Bagarmossen and the housing association about 15 years ago. Before the move, the couple had a number of criteria that were important to meet, among other things, south of town, biking distance to
town and close to nature. Another important criterion was that there would be no through traffic. Because of that the two places where they previously lived were not viable options.

Bergman family can be characterized as habitual cyclists. When they need a car in Stockholm they can either borrow from a friend or they rent one. The default setting is, however, "never drive in town," and therefore a carpool membership has never been an option for this family. Everyone in the family bike and the kids either bike or walk to school. According to the mother you can let the kids ride bikes without worrying because Bagarmossen have such good bike paths.

When it comes to using the cargo bikes everyone in the Bergman family had tested the bikes and booked them on a few occasions during the month of May. The father says he tested the electric but felt that it almost went too fast. The last time they used a cargo bike was when they carried things to a flea market where the daughters were going to sell their old clothes. After that the mother had booked one of cargo bikes so the oldest daughter could use it for her field trip, but this was around the same time as one of the bikes stolen and the remaining cargo bikes moved to a new place indoors in a garage in the yard. Since the cargo bikes no longer stood on their "usual" place and it was not clear where they had gone the daughter had to cope without the cargo bike on her field trip. Both the mother and the father believe that using the cargo bikes was more spontaneous when the bikes were visible and they were reminded that they existed. They also say that they thought the bikes were removed for good until our interview.

The Nordlund family provides a third example of users. The Nordlund family consists of Peter 47, Helena 49, and their daughter Mira 10. Both Peter and Helena have driving licenses and Peter has also owned a car previously but they lead a car-free day to day life and have done so for quite many years, at least as long as they have been together. Peter says he loves to drive but that it is rather pointless. The family has used the cargo bikes for doing their weekly grocery shopping and also for transporting things to their boat for the summer. When the family does their grocery shopping with the bike then Peter rides the cargo bike and Mira and Helena ride on their ordinary bikes and they all go to a store located in the adjacent city district, Skarpnäck. The distance is about 2, 5 km one way. The trip to the boat is an example of how a car trip actually has been substituted. Usually Peter lends his father in law’s car to do that trip but this time he wanted to try the cargo bike, and it went quite well. It has almost become a habit to look if the bike is in when passing by the garage. Yet another type of trip was when the family went to a garden shop located approximately 6 km from their home. All in all Peter and Helena conclude that cargo bike trips have indeed substituted many of the trips when they otherwise would have borrowed Helena’s father’s car. The cargo bike has proven to be a convenient way to manage the family’s transportation needs on an everyday level.

The different families have thus explicit car-free everyday lives and for all the families the trial has also meant an opportunity to try one more alternative to the car for transportation. Yet the families’ stories reflect rather different usage patterns. When Bill and his family used the bike on almost a daily basis during the summer, the Bergman family barely began to explore what the cargo bike could be used for. One reason for this could be how the information about what happened to the bikes reached the residents. While Bill and his wife knew what had happened to the bikes while the Bergman’s had not received this information. Another reason, not linked to the first one, could be the way in which the families pictured cargo bikes before the trial. The theory of planned behaviour states that the decision to perform a particular action depends on three situational beliefs: i) beliefs about the likely consequences of the action / behaviour, ii) beliefs about others' normative expectations and iii) beliefs about what factors might facilitate or inhibit the behaviour/act itself [17]. This perspective fits well into Bill and Olivia, who already before the trial had given serious thought to acquire a cargo bike. It becomes clear that the cargo bikes appeal to a particular segment of the residents. To live a car-free life in general, however, does not seem to be equated with needing a cargo bike to solve everyday transport in the local area. Rather, it is fair to assume that when there is a need to solve everyday transport in the local area along with a desire to live a car-free life the cargo bike is starting to emerge as a suitable mobility solution. In the Danish sociologist Miriam Godsken’s dissertation [18] about families with children in Copenhagen and their travel habits, she writes how travel patterns may change during the life course; she refers to these changing times as breakpoints. Such a breakpoint, for example, is when you have children; another breakpoint can be when you move. It is fair to assume that access to a cargo bike could be a way to maintain a car-free life style when people face such breakpoints in their lives.
4.2 To ride a cargo bike – a new practice or a new habit?

To understand how habits and practices change, Social Practice Theory can be a useful theoretical lens. A practice can be understood as a bodily-mental cluster of activities that are linked together in a meaningful unit for the performer. Elizabeth Shove and Mika Pantzar [19] argue that what defines a social practice is that it actively integrates materials, meaning and types of skills, which together link the social and material aspects of change. According to Shove and Pantzar practices only exist when people perform them and practices also need to constantly be reproduced to not disappear. A practice can thus be said to be an ongoing process where the integrate parts are changing and the way also practice in full. A new practice is according to this view rarely completely "new" without building on one of its component parts, materials, sense or form, takes on a new guise.

If we look at riding cargo bikes from a social practice perspective then, it becomes very clear that riding on these bikes require new skills that are not necessarily based on previous knowledge. Riding a cargo bike differs a bit from riding a "normal" two-wheeler without a box. It takes some time to get accustomed to, and the fact that it does differ from riding an ordinary bike might put off certain people.

Another factor that may play role possibly is the "novelty" factor, having access to cargo bikes. That can help people to become aware and may for some be a trigger to test at least. This does not obviously guarantee that the users will continue to use these. However, it is important to address the visibility of the cargo bikes in this context. Actually seeing the bikes on a daily basis can work as a reminder of their existence and that we have access to them. Yet another factor, more connected to the social part of social practice is the social context in which the cargo bikes occurs influences people to use them. If a resident sees his neighbours and friends using the cargo bikes and talk about using them maybe this will make him more inclined trying?

When the housing association board was planning the introduction of the cargo bike pool they decided to build on the laundry room booking routines. The board also came with the proposal to have the same key that is used to open the gate and which is also the laundry room key to open the bike locks. The booking practices and using the same key can be seen as examples of how certain parts of a new practice, such as material parts and certain skill parts, are based already existing practices. There is also a sense of continuity in meaning as the sense of the cargo bikes being something that all residents in the housing association have equal access to, the same way as the laundry room is. These are also ways which may help to keep the threshold for a new practice down and good examples on how new practices seldom are entirely new, but rather built upon and integrated into already existing ones.

Another way to explain habits is by seeing them as more or less physically anchored routinized actions that do not require any special reflection. Tim Schwanen et al [20] define habits as tendencies or forces that are implicit in (routinized) practitioners. The habit is what connects the body and mind with artefacts, infrastructure, other people, rules, beliefs, and other agents encountered as part of everyday life [20]. The habit can then be said to be what makes everything runs on “as usual”. Further, Schwanen et al. state that question about changing habits rather should work with the habits already in place and to do it on much broader way than it is done now. Habits are often established at an early age and by facilitating the kind of habits that are more sustainable, the more unsustainable habits could be left aside. One way to do this is by creating alternatives. The cargo bike trial did just that, an alternative means of transport was suddenly available for all the residents in the housing association and for the vast majority of the regular users, this became also a way to build on a habit that already existed, that is, regular cycling, to some extent. While it isn’t exactly the same thing to ride a cargo bike as it is to ride a regular bike it might have required a period of getting accustomed.

4.3 Different types of trips

During the trial the residents have used the cargo bikes for different types of trips. For example trips to supermarkets for weekly shopping, when transporting bulky or heavy items such as a mattress, or going to the rehearsal room with electric guitar and other music gear, or transporting parts of the boat equipment for the summer season. The cargo bikes have also been used to transport (smaller) children to different places.
Many of the trips that the residents have done with the bikes have been leisure trips, e.g. outings. One possible interpretation is that since the cargo bike is a new thing the users have made trips of a type that they usually do not do during the exploratory phase, such as excursions to nearby suburbs, or to the adjacent nature reserve, i.e. the type of trips that are not part of the day to day travels. Once the users have grown accustomed to the bikes through these exploratory trips, it seems that the residents have started using the bikes for trips with a specific goal and purpose and linked to everyday travel in a different way than outing trips.

Meanwhile, one of the residents who most frequently used the bikes mainly used them to transport three young children (3 years and under) to the playgrounds outside the near vicinity during his parental leave. This would have been very difficult to do without a car otherwise and shows one way that access to cargo bikes have helped create transportation opportunities and trips that otherwise would not have been. For some residents it is also quite obvious that the cargo bikes have to a certain degree helped to substitute car trips.

5 CONCLUDING DISCUSSION

Our study shows that the cargo bike pool was seen positively by both non-users as well as the users among the residents of the housing association. In this paper we have focused on the residents that did use the cargo bikes. The interviews with them show that they have in common that they are members of multi-person households, and that they have expressed a desire to live car-free lives. Additionally, most of the cargo bike riders also rode on regular bike on a regular basis. Finally, at least a few of the most frequent users had had extensive discussions about acquiring a cargo bike of their own before the trial.

The residents used the cargo bikes for different types of trips, e.g. trips to supermarkets for larger purchases, and for transporting other bulky or heavy items. The cargo bikes have also been used to transport (smaller) children to different places. Many of the trips that the bikes have been used for can be characterized as outing trips for leisure. Our interviews also indicate that after the users have passed the first exploratory phase the bikes have also been used for a wider variant of errands, even though outing trips still remain popular.

The frequent occurrence of exploratory trips we believe, demonstrate that the access to cargo bikes can be seen as creating opportunities or opening new possibilities. That is, a lot of these trips would perhaps never have happened, because the possibility to make them was not yet available. Having access to a cargo bike pool has led residents to make trips that they might not previously known they were going to make. ‘Possibility opening’ has a dual connotation; it means both being able to make trips that otherwise would not have been made but also being able to make trips that would otherwise have required a car. In some cases perhaps these two types of trips blend together and are different aspects of the same type of trip such as Bill’s trip to the second hand furniture store. Yet another way to express this is that the availability of a cargo bike provides the residents with a type of agency previously lacking. For the residents with an explicitly stated car-free lifestyle, access to cargo bikes definitely helped them to resolve their everyday transportation in a way that was consistent with how they want to live. This desired kind of lifestyle is also related to preferences of residence location.

Bagarmossen is an increasingly attractive place to live and we consider this as important to the outcome of the trial. Bagarmossen’s popularity is related to the inner suburbs closest to the city center becoming increasingly expensive to obtain housing in. This is also something that is mentioned in the interviews that we've done. Bagarmossen is not a place people end up in for no reason but rather a place that people seek out a variety of reasons, including the proximity to nature, good communications, there is no through traffic and that it is a safe and secure place compared to other similar areas at the same distance from the inner city. The interviewees revealed choice of residence in relation to public transport and (to some extent) their workplace as very important aspects. The fact that Bagarmossen and its surroundings are relatively flat and ‘bike-friendly’ also contributes to giving the trial favorable prerequisites.

The cargo bike trial in Bagarmossen suggests that even though it may be difficult to change everyday habits it is not impossible. The booking statistics show that 5 % of the residents booked the cargo bikes at 10 or more occasions thus confirming this assumption. Meanwhile, it is a complex process and it is hard to single out isolated factors that influence a person to start doing something in a
different way than before. However, we believe the following factors or prerequisites to increase the chances for a mobility solution such as a cargo bike pool to succeed.

One factor that favored the cargo bike pool was the design of the booking system. Both booking the bike and locking the bike built on already existing practices of the housing association and are good examples of how a new practice is based on elements of existing ones, which may help to keep the threshold down for a trying and developing a new practice. From a social practice perspective we argue that in the practice of riding a cargo bike is included a variety of different and sometimes new elements. Apart from cycling in itself riding a cargo bike as a practice also comes with a series of new ‘sub-practices’, who also need to be getting accustomed to, such as booking the bike, how to lock it, how to park it, how to use the electric battery, remembering to cover the cargo box, etc. As new sub-practices could also be viewed outings, errands that the pool opened up for (see above). All these elements cover what constitutes a practice and once they are in place there is no problem and will be carried more or less unreflective and routine.

We also believe that the potential of a cargo bike pool would be enhanced if introduced as a part of a wider package of mobility services. Riding cargo bikes may not be a viable alternative for all residents, or in all situations, but access to a cargo bike pool seems at least in an area such as Bagarmossen to help create space for residents to live a car-free everyday life and as such also help to show sustainable alternatives for transportation in everyday life.

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