

Article

The Importance of Public Transport for Mobility and Everyday Activities among Rural Residents

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Received: 1 December 2018; Accepted: 12 February 2019; Published: 16 February 2019



Abstract: A lack of transport opportunities has been shown to be a barrier for accessibility and social inclusion in contemporary society. In rural and sparsely populated areas, access to public transport is often poor compared to urban areas, leading to fewer possibilities to participate in normal relationships and activities among rural dwellers. Based on qualitative interviews with rural dwellers in Sweden, the aim of this study was to explore how access to transport can meet the needs of mobility and activity participation in everyday life and how different modes of transport are being used. The study has been permeated by the time-geographical perspective, which considers people's use of time and space and the restrictions they face in order to carry out activities, including travel. The results show that travel by private car plays a central role in realizing everyday activities for rural dwellers, as well as a perception of the car as being the norm in contemporary society. Frequent car use is the consequence of a combination of time-space restrictions, habit, and a lack of services, activities, and public transport in rural areas. Poor public transport services limit children's and adolescents' independent mobility in particular. Further, the physical environment influences the ability to use public transport, for example if roads and bus stops are seen as unsafe. Based on the results of the study, several measures and improvements are proposed that could increase mobility and accessibility in rural areas and reduce car dependency.

Keywords: public transport use; mobility; rural areas; mode choice; time geography

1. Introduction

A lack of transport opportunities has been shown to be a barrier to accessibility and social inclusion in contemporary society, especially among people living in rural and sparsely populated areas (McDonagh 2006; Farrington and Farrington 2005). Several long-term developments in contemporary society have affected mobility and accessibility in rural areas. Declining populations (urbanization) has led to a decrease of services and in turn to an increase in the transport needs among those who remain (O'Shaughnessy et al. 2011). Demographic changes due to ageing populations imply a change in transport needs and a declining number of people who commute to school and work. One of the issues also highlighted in the literature on rural mobility is that the car has been the dominant mode of transport for a long time (Brake and Nelson 2007; Velaga et al. 2012) and has overtaken the use of public transport. "The car supports the creation of distances and obstacles only it can overcome" (Aldred and Woodcock 2008). A consequence of this is that an increasing number of children are driven to school by their parents, which has a negative effect on their physical activity as well as causing them to have reduced interaction with their local environment (Ross 2007; Fyhri et al. 2011). People who live in rural areas and do not have a driver's licence or access to a car are at risk of being excluded from participation in normal relationships and activities (Lucas 2012). Children, older people, low-income families, and people with disabilities are overrepresented in this group (Moseley 1979; Brake and Nelson 2007; Velaga et al. 2012). Gray et al. (2006) have shown that the presence of social

capital can positively affect mobility among people in rural areas. Strong local social networks can promote mobility for certain groups. However, the existence of social networks differs between different types of rural areas.

There is an economic dimension connected to the cost of owning a car (Smith et al. 2012). Single and/or unemployed individuals are more vulnerable than others from a mobility perspective. Vulnerability increases as local access to shops, services, and activities decreases, i.e., when smaller communities are forced to move parts of their community service to larger towns or cities. In a study among rural dwellers in Scotland, Gray et al. (2001) found that people consider the car as crucial to maintaining employment, and that they would absorb the increased costs of motoring, while cutting back on other expenditures.

A challenge with providing public transport (PT) in rural areas is the difficulties in offering a service that fits different mobility needs among citizens at a reasonable cost (Shergold and Parkhurst 2012; Smith et al. 2012). To increase the willingness and opportunity to use PT in rural areas, information is needed about the demand for transport among different socio-economic groups.

Although people living in rural areas are not different from people living in urban areas regarding the need and willingness to participate in normal relationships and activities, the consequence of poor transport opportunities in rural areas greatly affects how households organize transport and what activities and places they have access to. For example, Gray et al. (2006) have highlighted the constraints of distance, access to services, activities, and transport in rural areas. There is a lack of similar research that highlights temporal and spatial conditions for mobility and activity participation in rural areas. Such knowledge is important to provide a transport system that is accessible to everyone throughout the country, in accordance with Swedish national transport policy objectives (Trafikanalys 2017).

Through a time-geographical approach, this article reveals local examples of the importance of transport for implementing everyday activities when living in rural areas in Sweden. The aim is to explore how access to transport can meet the need for mobility and activity participation in everyday life and how different modes of transport are being used. The article sets public transport in rural areas into the transport justice and social inclusion agenda, and highlights strategies and opportunities for mobility.

Everyday mobility and accessibility for rural populations has been explored in research, from the perspective of transport-related social exclusion (Shergold and Parkhurst 2012; McDonagh 2006; Gray et al. 2006), car dependency (Gray et al. 2001; McDonagh 2006), commuting behavior (Sandow 2008), and willingness to pay (Israel Schwarzlose et al. 2014). Several studies have described, analyzed, or evaluated alternative solutions to regular PT, such as car-sharing or car-pooling (Parker et al. 2011), demand responsive transport (Wang et al. 2015; Davison et al. 2012), and information technologies (Velaga et al. 2012; Papangelis et al. 2013). However, Swedish conditions have rarely been highlighted within international literature. One exception is an article by Sandow and Westin (2010), although they considered preferences for commuting and not transport for other everyday life activities.

1.1. Public Transport and Alternative Mobility Solutions

In Sweden as well as in other Western societies, several attempts have been made to find optimal solutions to the need for rural transport (Lindgren and Berg 2017; OECD/ITF 2015). Demand responsive transport (DRT) is a common solution, especially in Great Britain and Ireland (Lindgren and Berg 2017; Wang et al. 2015; Davison et al. 2012; Velaga et al. 2012; Brake et al. 2004). DRT can be organized in different ways; sometimes this is through fixed or flexible timetables and routes, but most often, transport must be booked in advance. Evaluations show that many attempts have been unsuccessful in increasing travel by PT, possibly due to time limited offers, with limited budgets and insufficient marketing (Davison et al. 2012; De Jong et al. 2011; Trafikanalys 2014; Börjesson 2010). Furthermore, the knowledge of citizens' needs and preconditions for mobility is often lacking, so new

transport solutions have not been well adapted to potential users. OECD/ITF (2015) emphasizes that the perception of the concept of PT needs to change and that people are moving from vehicle ownership to considering the car as a service. However, the growth of mobility as a service (MaaS) is primarily seen in cities, where it is expected to have the greatest impact. Small towns and rural areas remain without these kinds of services, with the exceptions of a few privately organized car-pooling solutions.

Lindgren and Berg (2017) show that PT planners express expectations and possible solutions that could increase travel by PT in rural areas. Such solutions include the following: real-time information, which could facilitate people who live along a bus route where there are major variations in punctuality; “next generation” payment systems, which is expected to solve the problems of combining PT and special transportation services; and automated/driverless vehicles, which could offer completely different mobility services for rural populations in the future. The problem with these expectations is that they do not attract people to PT now and, most importantly, that they have not led to any specific efforts in making PT more available in rural areas. Technical solutions cannot by themselves increase mobility and accessibility in rural areas if there is no PT or if the PT that exists is not available at times when people need to travel.

Increasing accessibility does not necessarily mean that the ability to travel must increase but that transport is one of many dimensions of accessibility (Farrington and Farrington 2005). Accessibility is based on several different components: land use and spatial location of, for example, workplaces and housing; transport systems and individual ability to bridge distances; available opportunities at different times of the day; and the individual’s needs, opportunities, and abilities (Geurs and Eck 2001). The different components of accessibility imply that what is accessible to one person may not be accessible to another, even when they live close to each other. Measures aimed at improving mobility and accessibility among different groups must therefore consider the geographical and social context in which they live (Gray et al. 2006). This study contributes to the existing knowledge by studying how people organize their mobility and the temporal and spatial constraints they face in order to implement everyday activities.

1.2. Sweden’s Rural Contexts and Transport Provision

Sweden’s demography and geography differs from many other EU countries. Sweden is a sparsely populated country (approximately 10 million), relative to its size, although population density differs between counties. Of all the countries in the EU, Sweden is the third largest country, but it only has the 14th largest population (Eurostat 2017). Of the Swedish population, 34% live in rural or sparsely populated areas. It should be emphasized that rural areas are heterogeneous with different characteristics in terms of size, demography, geography, the presence of industries and businesses, distance to urban areas, etc. In Sweden, areas that are not urban but not remote are commonly defined as rural areas close to urban areas (Tillväxtanalys 2009). Those areas are located at a distance of 5–45 min by car from any small town with more than 3000 inhabitants. Twenty-one percent of the Swedish population live in these areas. In these areas, there is a larger potential to offer public transport than in remote areas, due to a large customer base and the relative proximity to a town. As this study was part of a larger study aimed to explore solutions that can enhance people’s willingness and ability to use public transport in rural areas in Sweden (Berg 2017), the empirical data for this study was collected in rural areas close to urban areas, rather than in remote areas. Rural areas also consist of villages, i.e., clustered settlements where people live, a term that is also used in this study.

Each county in Sweden has a regional public transport authority (RTA) that is responsible for providing access by public transport to all travelers. The responsibility for different transport categories, such as special transportation services (STS), patient transport services (PTS), and school transport, is divided in different ways in each county. In some counties, the municipality and/or health authority is responsible, while in others the RTA is responsible. Thus, in one county there may be three separate transport authorities. This administrative division has been shown to make it difficult to coordinate

different transport categories and implies both additional costs and difficulties in providing transport for people with special needs and people living in rural areas (Ahern and Hine 2011; De Jong et al. 2011).

The coordination of different forms of transport in Swedish rural areas has been tested, such as making school transport available to the public or the coordination of STS and PTS. Some initiatives have shown good results while others have had to be shut down due to a lack of travelers or the costs being too high per trip. In this article, the coordination of different transport categories and the effect on mobility opportunities for rural dwellers is considered.

2. Methods and Context

2.1. A Time-Geographical Approach for Studying Mobility and Activity Participation

This study is based on a time-geographic activity approach, which considers how people use time and space and how different resources and restrictions influence their ability to carry out activities, including travel (Hägerstrand 1970; Berg et al. 2014). The time-space concept is vital for understanding mobility since time in relation to place sets limits for when, where, and how long activities can be carried out and how far people can travel. Rather than focusing on behavior per se, the time-geographic approach considers the restrictions that surround the individual and limit their freedom to implement activities. (Hägerstrand 1970). This line of thought is consistent with Moseley (1979) who stated that opportunities rather than behavior are central in rural accessibility policy since transport is constrained by the available range of transport resources.

Activities and *projects* are central time-geographical concepts used in this study (Ellegård 1999). A series of *activities* that are necessary to achieve certain goals constitutes a *project*. How projects arise, how they are implemented, who implements them, and how they compete for space and resources are central in time-geographical thinking. This study's focus is not on the activities and projects per se, but rather on the analysis of how the realization of activities and projects is restricted or enabled in relation to mobility and accessibility. According to time-geography, three types of restrictions surround the individual: *capacity* (basic needs, access to tools, and knowledge), *coupling* (individual social and material contexts, coordination between people, material artifacts, and the physical environment), and *authority* (laws, regulations, and norms in society that restrict access to certain places). The concept of restriction also clarifies which resources are available for an individual to be able to perform their desired activities and projects (Ellegård and Svedin 2012). By identifying these spatial and temporal restrictions and resources in the data, context-dependent knowledge of the everyday complexities that affect people's mobility and travel behavior can be gained. Qualitative interviews can reveal complex mobility patterns, situations, and time-space restrictions and resources that an individual is consciously or unconsciously experiencing (Berg 2016).

2.2. Participants and Recruitment

Individuals from different households and geographical locations participated in this study. A requirement of the recruitment was that they should live in a rural area close to an urban area (see definition above). The rationale for this was that in such areas there is either some form of public transport or the potential to operate public transport due to a certain customer base, unlike remote areas where the customer base for such service is more limited. A digital route planner was used to find rural areas for the recruitment of participants. The rural areas in which the participant's lived were located in three different Swedish counties: Östergötland in Southeastern Sweden, Dalarna in Central Sweden, and Jämtland in Northern Sweden. Characteristics of the areas differed in terms of distance to an urban area, access to PT, shops and services, as well as sports and leisure activities.

The study was based on in-depth interviews with individuals from 14 households. Altogether, 17 people were interviewed, 10 of which were women. In one interview, three family members participated and were interviewed at the same time. In another interview, two family members were interviewed together. The participants differed in terms of age, housing tenure, marital status,

and occupational status. Two participants were retired, one was in high school, and one studied at university. The others were employed. They all lived at a distance of 5–30 min by car from a town with more than 3000 inhabitants. Two participants lived in the outskirts of a village. The others lived in villages. Two lived in apartments and the others in single-family housing. Seven of the participants had access to public transport in the village where they lived. The interviews were carried out in a place chosen by the participant, i.e., the participants' homes, in a library or a café, or at the office of the authors.

The participants were recruited through different methods: through local associations for pensioners, advertising on Facebook, the authors' networks, or contact with officials in the municipalities where the participants lived. In a snowball sampling manner (Kitchin and Tate 2000), participants were also, after interviewed, asked to suggest neighbors, friends, etc. that would be willing to participate, some of whom did. In order to establish a wide range of representation of living conditions, when selecting and inviting participants for interview, several factors were taken into account. Age, marital status, household size, and geographical location were four important factors that were considered. In line with the principle of informed consent (Swedish Research Council 2011), all participants were informed about participation in the study, confidentiality, and use of the empirical material. The interviews were recorded digitally with the approval of the participants.

2.3. Analysis

The analysis was based on transcriptions of 14 interviews and formed around a content analysis approach (e.g., Patton 2002). The interviews were initially read by both authors in order to become familiar with the data, and then coded from a broad perspective but with the aim and research questions as a general guide. In the subsequent coding process, narratives linked to the research questions were more thoroughly coded regarding content. Then these codes were interpreted, sorted, and merged, and broader themes were created. Both authors worked together in this process, which involved questioning each other's interpretations and developing the themes together. Throughout this process, the interpretations were anchored in the empirical material, which increased the trustworthiness of the results. In the analysis, narratives that could be interpreted as restrictions on, or resources for, mobility according to the time-geographical approach were also identified. The analysis resulted in several main themes and sub-themes, presented in the next section. The qualitative data analysis software QDA Miner was used as a tool during the analytic work.

3. Results

The interviews revealed contradictory narratives, such as negative and positive statements about living in rural areas and how it affects mobility and travel behavior. Positive narratives concern social cohesion in the village, tranquillity, proximity to nature, and local access to shops, services, jobs, and leisure activities. In other narratives, negative aspects are highlighted, for example, poor public transport, poor local access to services and activities, and long distances to work, school, and activities. The location of the village in relation to a more urbanized area and local accessibility affected their time-space use and the organization of everyday life. Some parents reported making many trips per week to travel between work, school, and children's leisure activities, while others limit their children's participation in leisure activities due to perceived temporal restrictions. Thus, life stage is also an important factor for mobility and activity participation.

3.1. Common Welfare as a Precondition for Rural Dwelling

It appears in the interviews that common welfare can be regarded as authority resources for living in rural areas, which are not in the individual's own power to influence. One participant (No. 10), who is retired and lives with her husband, was 22 km from the nearest town, which meant that access to home care services was a precondition for remaining in a rural area when they could no longer drive a car. Parents with children stated that they could not live where they live without the school bus.

3.2. Reasons for Car Use

The car is the most used mode of transport among participants, which has been confirmed in previous research on travel behavior. The car provides a seamlessness that other modes of transport cannot compete with and is thus an important coupling resource. It signifies flexibility and independence and is a necessary resource when living in rural areas in terms of being able to participate in working and social life. Many participants have two cars in the household, and, although they regard it as expensive, they do not question their use of it. Car use is strongly linked to their own daily schedules, where working hours, taking children to and from school and other activities limit their time-space use. The car is also necessary for shopping and other errands. One participant explained:

You cannot carry 4 bags on the bus. We do weekly shopping because we do not have a shop here (No. 6, married, two children).

Further reasons given for car use are convenience, force of habit, and the perception of owning a car as a norm in contemporary society.

Few participants reported that they combine the car and PT. Coupling restrictions for using other modes of transport are when there is no PT service available, when roads are not adapted for cycling and walking and when it is too far to cycle or walk.

3.3. Perceived and Actual Restrictions on Using PT

Some perceived restrictions of using PT appear in the interviews. The distance between the home and transport hubs (i.e., bus stops and rail stations) is often crucial to why PT is not used. Some state that different bus routes are badly coordinated. Many participants reported that, when using PT, when their first bus arrives at its destination, the connecting service has already left. Because the buses do not run very often, they have to wait a long time for the next bus, often up to an hour. Participants also reported that timetables are not adapted to times when most people need to travel to work. One example of this is that the buses run between nine o'clock in the morning and three o'clock in the afternoon, when most people are already at work or school. One participant explained that PT planners need to have more knowledge about the travelers and their needs.

A further restriction that was mentioned concerns the cost of PT. One participant (No. 10) stated that it is especially expensive when traveling between two regions. The nearest town to where she lives is located in another region. As travelcards only apply in one region (as in many Swedish regions), she must pay an extra amount to travel to her nearest town. The regional boundaries constitute authority restrictions on how people can use PT. Thus, the nearest town can be difficult to reach by PT, even when it is only a short trip by car.

Another important aspect that appears in the interviews concerns the importance of the routes between the home and the nearest bus stop. When the route is seen as too long, poorly maintained, or too dangerous, PT is perceived as an impossible option, even when PT between the bus stop and the destination is good. In some areas, bus stops are connected by PT. In those cases, PT works well for the participants. This illustrates the importance of the quality and safety of the route to the nearest bus stop when it comes to choosing or not choosing PT.

For high school students in rural areas, a lack of PT is an authority restriction, since the largest range of high school education opportunities is found in urban areas, and high school students do not automatically have the right to use the school bus, according to the Swedish Education Act. Two common consequences of this, according to participants, are that students choose to attend the school that is closest to home, not the one offering the education they would prefer, and that the journey to school, and thus the school day, is much longer. In other words, the supply of education is more limited for young people in rural areas. Parents stated that they worry about their situation once their children begin high school. Some families suggested that they might move closer to town, even if they like the village they live in.

3.4. The Design and Location of the Bus Stop

A topic raised during the interviews concerned access to PT in terms of bus stops. Good bus stops were seen as ones that had streetlights and a roof, that felt safe to wait at, and that offered safe parking for cars and bicycles. A perceived risk of cars or bicycles being stolen or vandalized was given as a reason not to use PT.

The interviews reveal local variations of strategies for using PT. One participant (No. 7), who lives three kilometres from the nearest bus stop, explained:

They have taken down the bus stops here. So, there are no stops. But we have walked out [to the road] and waved and he has stopped. It was a long time since it there was a bus stop here. At the crossroads here, five meters away. Ten years ago [...] But some bus drivers have been grumpy and said that "you have to get down to (xxx) because we do not stop along the road." I know they have done so, but not to us (No. 7, retired, married).

She reported that those who live in the village have a silent agreement with the bus driver that they can wave at the driver when they want to catch the bus. It works as long as the bus drivers agree on this deviation.

There is not always a designated space for school buses to stop by the roadside, often only a sign. In some areas this is seen as safe as there is little traffic. However, there are children who cannot travel on the school bus because the roads are too dangerous, for example, when busy roads have to be crossed and timber trucks pass at high speeds. Parents to two children who were interviewed at the same time (No. 1) talked about their children's options for catching the school bus that they are entitled to use:

[...] you must live one kilometer or more from the bus stop to be entitled to be picked up by the school bus from the house. But we live 900 m from the crossroads down there. So that's why [the child] is not [...] otherwise they would have come here and picked [the child] up. But now [the child] must walk down there, and this road is very busy, with timber trucks and such. When you are seven years old, you do not walk there alone at seven o'clock in the morning (No. 1, married, two children).

Instead, the parents take the children to kindergarten and school by car. As permission to use the school bus is based on distance rather than on a consideration of environmental factors, it is an authority restriction for the children's mobility and independence. For older children, this means that they cannot go home after school without having to be given a lift by a parent. In Sweden, it is common for children to go home by themselves after school from around the age of 11.

3.5. Advantages of PT

One of the advantages for those who regularly travel by PT is that they can use the time for working, studying, surfing the internet, relaxing, or listening to music. One participant (No. 12) said that once people get used to the bus, they realize that it is quite nice, meaning that she has changed her attitude and sees many advantages in going by bus. Not having to pay parking fees is another advantage of using PT over the car, although some participants take the car to a PT hub or station.

Four aspects that characterize well-functioning PT appear in the interviews. Firstly, PT must be synchronized with the times that people need to travel. Secondly, it must not take a much longer time than traveling by car. Thirdly, the cost must be in proportion to the perceived cost of using a car, and, fourthly, the bus stop and the route to it must be satisfactory.

3.6. Perceived Barriers to Privately-Organized Car-Pooling

Car-sharing very rarely occurs among participants, except within families for weekend activities such as shopping. Only on special occasions do they accept lifts from or offer them to acquaintances in the village. When asked to account for why they did not do so, they said that it is because of irregular working hours and/or because they need to drop off and pick up children from school and

kindergarten. It is difficult to find someone who needs to leave and return home to the village at the same time. Furthermore, relying on car-pooling is difficult when there are no other options for transport in the area. What happens if the trip is cancelled? Participant No. 5 explained:

I'm thinking, if people get ill or if their children become ill, then you have to be able to give lifts yourself anyway, so I'm not certain about [car-pooling] actually (No. 5, single, has a son who she lives with every other week).

She pointed out that it is too time-consuming to organize transport between parents. Each family might as well drive their own children. She felt that a digital application (app) for car-pooling might be an option for her family. Many participants thought that mobile services are lacking in rural areas, but that broadband works well. Thus, there is potential for introducing app-based car-pooling services; however, not all are interested in using it. Moreover, participant No. 14 stated that apps are not for older generations, even though some could probably learn to use them after an introduction.

Furthermore, being a passenger in a car with an unknown driver is described as unsafe, as the driver may drive too fast or dangerously. Additionally, private car-pooling requires a person to be sociable and to want to socialize with other people, perhaps even with someone he or she does not know. In PT, it is not necessary to be sociable, even when traveling together with many people.

3.7. Solutions Suggested by Participants for Increasing the Use of PT or Alternative Transport Forms

Participants suggested alternative transport solutions, technical solutions, increased PT services, and coordination of different forms of PT.

A lack of PT limits the opportunities for participating in leisure activities, especially for children and teenagers. DRT can be a solution, according to some participants, even for retired people. One participant stated that it is reasonable to have to book trips in advance when you live in a rural area and that people cannot expect a 100% service for everything. It is further suggested that, if school buses were open to the public, older people and people without a driving licence would have a mobility option in areas that are not otherwise supplied with regular PT.

Technical solutions that were suggested are apps to coordinate transport that circulates in the area. One participant said:

You can compare [the app] with Messenger [. . .] You can have a conversation . . . you know who's going to that activity or whatever it is, so [. . .] you can have a small group that drives. That's a good thing (No. 3, married, two children).

If more people were to travel by publicly-funded PT or private or commercial transport solutions, people in the area would need to be aware of what services were available and how to use them. Furthermore, Participant No. 12 said that if there were more than one PT service to choose from in the morning and in the afternoon, her family could manage with only one car in the household.

Participants suggested better coordinated PT, for example, the possibility for everyone to use the school bus, including high school students. Participant No. 12 said:

It would have been nice if the boy could go with the school bus, so he wouldn't have to go to school so early. I tried to let him use it, but it didn't work. I even offered to pay for the bus, but [that] didn't work either. And yet, the younger children who go on the bus go to the same school as him. It's such bureaucracy (No. 12, married, a son who lives with her every other week).

Further comments were that PT should be adapted to the times most people need to travel to work and that it should be possible to pay for DRT services with a regular travelcard and to book several trips in advance (in some regions this is possible).

4. Discussion

In this study, time-space restrictions that influence participants' mobility and preconditions for using different modes of transport have been identified. The results show that the car is the main

mode of transport among most participants, which corresponds with the National Travel Survey in Sweden (Ridderstedt and Pyddoke 2017). Frequent car use reflects the idea of automobility as the dominant mode of travel in society (Cass and Faulconbridge 2016; Urry 2004), and for rural life it is a necessity (Gray et al. 2006). Lack of shops, services, and activities can be understood as coupling restrictions, as the material resources that individuals need for a well-functioning everyday life are distantly located, which explains why journeys are very time-consuming. This requires a completely different kind of planning for families than if the resources were nearby. It is shown that capacity restrictions for mobility are clearest among those who do not have a driving licence, namely high school students, as they are not entitled to use school buses. They must rely on others (mostly parents) for lifts, choose the nearest school, or face long days away from home. Some participants combine the car and PT, which requires a hub with relatively frequent services. If school buses were made available to the public, PT could be used for the whole journey to work. In addition, not all children can use the school bus because the bus stops are often viewed as too unsafe for children. In these cases, their parents drive them to school.

Several coupling restrictions that influence mobility and transport mode choices are identified in the interviews. The most obvious example is how parents of young children must constantly juggle their scarce time resources to travel between work and collecting children from school. This juggling of time is certainly not unique to families in rural areas, but the longer it takes to get home and the fewer services available in the village, the more difficult it is to squeeze other activities into the daily schedule, such as shopping on the way home or participation in organized leisure activities in the evenings. In a study of families living in a rural municipality in Sweden, Cedering (2016) shows that children's long journeys to and from school affects the parents' time space use and requires them to decide which everyday projects should be prioritized and which ones they must opt out of.

The physical environment influences the participant and their children's ability to use public transport. When roads and bus stops are seen as unsafe, the entire journey to work or school is made by car. Being driven by car can have negative consequences for health and children's independent mobility (Fotel and Thomsen 2004). When children can engage with their local environment as part of their mobility practice, it generates feelings of belonging and enhances their environmental and social relations, which contributes to their personal and community identities (Ross 2007; Fyhri et al. 2011). Furthermore, children who freely walk or cycle acquire competence in handling risks in the local environment (Van der Burgt and Cele 2014). Being dependent on parents to drive them prevents the children from acquiring such relations and competence. Obviously, it is desirable to protect children from hazardous traffic environments, but instead of withdrawing them from these environments, the environments should be made safer for children to walk, cycle, and play in.

The perception of the car as a norm can be seen as an authority restriction as it hampers the development of public transport and opportunities for car-sharing. At the same time, public transport services have been closed down due to a lack of use. Various explanations as to why the car is used are consistent with previous research. For example, Gray et al. (2001) argues that for many the car is the only option to attain and maintain employment, especially among people in remote areas. Therefore, policy measures aimed at reducing car use, such as increased cost, affects rural dwellers more as they have fewer alternatives for mobility than people in urban areas. Mattioli et al. (2016) showed that cars are used to transport everything from children and newly purchased clothes to material for recycling. Furthermore, many everyday practices are organized based on car availability, such as shopping and flexible working hours (Kent 2014; Shove 2002). The idea of flexible, comfortable, and fast transport as a norm is an important argument for car travel and has important consequences regarding the possibility of running public transport in rural areas, due to the smaller customer base.

The fact that people can afford a car and accept the cost reduces the interest in car-pooling. Additionally, previous studies show a lack of willingness to car pool. Soder and Peer (2017) explored the potential role of rural employers in supporting car-pooling among their employees. The employers were dubious about the success of such initiatives due to the perceived difficulty of coordination and

the increase in travel time. The participants in this study felt that it can be difficult to find someone who wants to travel at the same time to the same place, but are positive towards trying new solutions, such as a car-pooling app. A related capacity restriction is the lack of experience of such services and knowledge of how apps work. Based on the results of this study, there might be potential for car-pooling or other mobility services (MaaS) provided the following:

1. organized MaaS, preferably driven by the municipality or the RKM;
2. services that are appropriately marketed to the target groups;
3. the option for people to test how new mobility solutions work to implement their everyday life activities.

MaaS in rural areas could be a solution for first- and last-mile travel and for increasing efficiency and utilization rates for publicly funded transport such as that used for conveying children to school, for special transportation, and for hospital trips (Aapaoja et al. 2017). Additionally, non-transport services such as library services, food, and parcel delivery could be combined with MaaS to increase accessibility in rural areas.

Based on this study's results, several measures and improvements are proposed that could increase mobility and accessibility and reduce car dependency in rural areas:

- Rural areas and public transport hubs need to be linked with public transport, for example by coordinating school buses and conventional public transport.
- Coordination between public transport and other forms of services, such as delivery of post, groceries, and other goods, is important in order to manage the whole journey and all everyday activities without a car.
- Coordination between the regions (i.e., public transport authorities) is needed in order to offer effective public transport between main towns, by focusing on geographical proximity rather than administrative boundaries.
- When it comes to new mobility solutions, people must be given the opportunity to test how these work in everyday life.

Methodological Reflections

An important methodological aspect to reflect upon is to what degree the results from this study are valid in a broader sense, i.e., being transferrable (Lincoln and Guba 1985) to other contexts. In this study, a broad range of participants was selected as data sources, coming from different households and geographical locations, but who all lived in rural areas close to urban areas. We believe that the participants in this study represent a relatively broad spectrum of experiences in living in such areas with its relation to everyday life and mobility needs. In this sense, we argue that we have covered many aspects and perspectives. At the same time, many of them also seemed to have much in common. Towards the end of the data collection, a smaller amount of new information came through, which indicates some saturation in data. Therefore, the results of this study should be transferrable to other, similar contexts. However, it is not our view that the results reflect the full complexity and diversity, nor was it our goal to achieve this. Rather, this study lifts local examples that together reflect something that is shared and general for citizens living in rural areas. Therefore, this study's results contribute useful knowledge in the understanding of mobility and everyday activities among rural dwellers.

5. Conclusions

The present study has shown that the car is the dominant transport mode in rural areas in Sweden. The car offers a flexibility that public transport or ride-sharing cannot compete with. Several space-time restrictions exist that limit the ability to travel by public transport: public transport is not adapted to times when people want to travel; school buses are not open to the public; administrative borders

makes it time-consuming or too expensive to travel between counties; no public transport connections between places which the individual need to travel; and locations of bus stops are often too dangerous for children to wait for the bus.

In this study, people who live in rural areas have been interviewed, and many travel from their villages into towns to work and study. However, rural areas themselves are of great value for the development of the country as a whole, in the form of goods and services from the agricultural industries, the assets of the natural and cultural landscape, and various forms of activities conducted by the people who live there. Good transport alternatives to rural areas are thus a prerequisite to attract labor and visitors for companies and organizations that are active in rural areas. Knowledge gained from this study is useful in research and planning aimed at improving transport to rural areas for working, studying, and recreation.

Author Contributions: Conceptualization, J.B. and J.I.; methodology, J.B. and J.I.; software, J.B. and J.I.; validation, J.B. and J.I.; formal analysis, J.B. and J.I.; investigation, J.B. and J.I.; resources, J.B.; data curation, J.B. and J.I.; writing—original draft preparation, J.B. and J.I.; writing—review and editing, J.B. and J.I.; project administration, J.B.; funding acquisition, J.B.

Funding: This research was funded by The Government of Sweden.

Acknowledgments: We are grateful to everyone who gave their time and shared their experiences in the interviews for this research. The study is part of a larger study commissioned and financed by the Government of Sweden, with the aim to explore effective and innovative solutions that can enhance people's willingness and ability to use public transport in rural areas in Sweden. We would like to thank the Government of Sweden for financial support. We would also like to thank the three reviewers of our article for useful comments on earlier drafts, which helped us to improve the quality of the final submitted version.

Conflicts of Interest: The authors declare no conflict of interest.

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