Rural views on the transition from fossil-fuelled cars to electric cars

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Landsbygdsperspektiv om övergången från fossildrivna bilar till elbilar

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Abstract

This study highlights perspectives considering the transition from fossil-fueled cars to electric cars in the Swedish passenger car fleet. The perspectives origins from semi-structured interviews with six rural residents in Värmland, Sweden, and from examined editorials, news reporting and debate articles in the Swedish newspaper Dagens Nyheter (DN). The theoretical approaches of this case study are sociotechnical imaginaries, ontological security, identity, and a reinterpreted version of “the agrarian question” which I refer to as “the rural question”. Using these theoretical approaches, I have found that fossil-fueled vehicles in rural areas have a dimension of certain social identities and role identities that are dependent on the internal-combustion engine. I also argue that the need for ontological security among car drivers are one reason to why rural citizens have not fully committed to the imaginary of an electrified future of the passenger car fleet. Sociotechnical imaginaries appear in both DN and the interviews, where journalists in DN have a particularly optimistic imaginary of an electrified future, while the participants show a wider range of imaginaries. I have also interpreted a worry among journalist of being associated with right-wing movements like the fuel uprising when writing about possible solutions for rural areas in terms of expensive fuels. I conclude the thesis by stating that rural areas demand a more wide range of technological solutions than urban areas.

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1. Introduction

It was a Tuesday in September when I looked out the kitchen window at my parent's place in Värmland. On the driveway I saw not one, but two, three, four, five and six fossil fuel driven vehicles. One tractor, one excavator, two diesel cars and two petrol cars. There have always been a great number of vehicles on the farm, but suddenly it struck me what a fragile thread our fossil dependence is built on, and that it is an actual dependence, a need. I realised that the phase-out of fossil fuels that Sweden, and the world, are facing will be a great challenge. Rural areas might be the ones most affected by the ongoing transition.

The transportation fleet in Sweden is currently undergoing a slow "make over". As recently as February this year, the government released an electrification strategy that calls for faster development of the electricity grid, to catch up with an increasingly electrified transportation fleet (Government Offices of Sweden 2022). Electric cars are in the forefront of this make over, as a messenger that the times are changing. However, even if the numbers of citizens driving electric cars are growing, it is still only a minority that have replaced their fossil car with an electric car. This means that other solutions are also needed to lower the carbon emissions. In 2018, the government introduced a law which forces fuel companies to mix fossil fuels with biofuels, called *the reduction obligation.* This, together with taxes (about 35 percent of the diesel price) and increased prices of international oil, has raised the price of fossil fuels at the gas stations (Holmström 2021)(Armelius 2022). In 2021 the reduction was six percent for petrol and 26 percent for diesel, compared to 2018 when it was two-point six percent for petrol and 19,3 percent for diesel (Swedish energy agency 2021). In February 2022, Sweden had the most expensive diesel price in the world (Grosshög 2022). As a reaction to the rising prices, the movement "The fuel uprising" (Bränsleupproret), has gathered members through a Facebook group with the same name since 2019 (Bränsleupproret n.d). Their ambition is to lower the taxes on fossil fuels. They want Swedish citizens to be able to live anywhere, for example in rural areas, without paying too much for fuel and fuel taxes. Their goal is explained on their webpage:

> We strive for a society where motoring is not overtaxed and where all Swedish citizens feel free to work and live where they want without being penalised with taxes. (Translated by author)

However, not everyone agrees that lowering the taxes on fossil fuels is the right way to go. On the other side of the fuel uprising stands "the fossil rebellion" (Fossilupproret), which is linked to the international movement "Extinction Rebellion" (Extinction Rebellion Sverige 2022). They demand better climate politics that can ensure a future for the humanity and the planet. They write on their webpage:

> We strive for a world where we take care of each other and our environment in a way that creates hope and gives us the opportunity to decide what our lives and our future should look like. (Translated by author).

The fuel uprising and the fossil rebellion represent two different directions in society. Whereas one side worries about how they will be able to afford transportation in the future due to rising fuel prices, the other side worries about the future of our common planet. The media has the power to construct what is tolerable and right in our society. Fürsich (2010) describes that *"contemporary mass media operate as a normalising forum for the social construction of reality"* (p.113), meaning that mass media can steer the attention from and towards issues either consciously or unconsciously. Thus, it means that some news does not get as much attention as others, or some news may distort the perception of how something is or is not. For example, it is natural that people in rural areas reacts to rising fuel prices because they depend on cars for transport. Which also means that the rural residents' risk being associated with movements such as the fuel uprising, while many may sympathize with the fossil rebellion, or find themselves somewhere in the middle of these opinion bubbles.

Regarding rural areas and cars, most of the rural car fleet still consists of diesel or petrol cars, just as it does in any other area in Sweden. Today the transportation fleet and the industry are the two largest sources of greenhouse gas emissions in Sweden (Holmström 2021). 86 percent of the Swedish car fleet runs on diesel or petrol, and six percent consist of electric cars or electric hybrid cars (Trafikanalys 2022). But why have not more people bought electric cars? That issue is discussed by Rotaris et al. (2021) through a survey study about the adoption of electric vehicles in Italy and Slovenia. They mean that the higher knowledge a person has about electric cars, the greater the chance is that they will buy one. They also address that the level of environmental interest often determines the purchase. This perspective can be broadened by the survey by Klöckner et al. (2013) that address

that the electric car are often bought as an additional car in a household's car fleet. Which means that increased sales of electric cars do not necessarily mean that everyone who buys electric cars completely switches to electricity, but also uses their old fossil car. Thus, car drivers still see a reason to use their old cars. Therfore it is important to look at the barriers that exists in the adoption of electric cars, which is done by Westin et al. (2018) through a survey of *all* car owners in Sweden. They saw a bigger adoption rate to electric vehicles in urban areas, apart for some hotspots in rural areas that often were linked to a high rate of tourism. This is also shown in a study by Egnér and Trosvik (2018), who address the linkage between the amount of public charging points and the adoption rate of electric vehicles. They state that urban places are overly represented in the development of charging points, and it is also in urban areas the average electric car driver is located.

Already in 2012 Haugen (2012) advertised for more research on adoption to alternative fuel vehicles in sparsely populated areas, arguing its importance because the rural areas *"constitute a substantial share of the population"* (ibid p.3). She asserts that rural areas would be less vulnerable for changes in taxes on emissions if they were less dependent on fossil fuels. Newman et al. (2014) also points out the importance of focusing on rural areas in the development of an electrified future. They suggest that it would be wise to focus on rural areas in the development of an electrified passenger car fleet, where the expressed need for cars is greatest. Both Haugen (2012) and Newman et al. (2014) state that rural areas need more attention in the development towards an electrified future, as public transport will probably never be an option for many of the citizens living there. Haugen (2012) mainly addresses that the development of all forms of fuel solutions is needed, thus she includes all vehicles that are powered by "alternative fuels". There is also an aspect of the car driving that are more philosophical than technical, the freedom of travel. Duncan (2016) writes about the poetry of the car. He argues that the technological development of the 20th century has shaped the human perception of things, in a way, that has affected how poetry and literature is written. According to Duncan, the car has become a symbol of freedom due to the great change in a human's life; from never moving further than the neighbouring village during a lifetime, to being able to travel the entire world.

1.1 Aims of the study and research questions

The purpose of the study is to investigate how rural residents experience the current and anticipated changes of the passenger car fleet, towards electrification. Part of this investigation is to discover how they imagine the future of transportation in the areas they live as well as getting a deeper understanding of the concerns they might

have about electric cars. To add context to these interview perspectives, I have also conducted a textual analysis of the morning newspaper Dagens Nyheter, which is one of the most read newspapers in Sweden. To fulfil this aim I will answer the following questions:

1. What are the main concerns that appear when people in northern Värmland talk about electric vehicles?
2. What future imaginaries, regarding transportation in their place of residence, appear in the interviews?
3. How do these imaginaries compare or contrast to those represented in Dagens Nyheter?

1.2 Limitations of the study

On the one hand, this study aims to highlight perspectives from those who drive cars daily in rural areas. On the other hand, it aims to highlight how media portrays the transition from fossil-fueled cars to electric cars and its effects for rural residents. The following thesis will not investigate which technological solutions that are best suited for rural areas. Nor is it a thesis that intends to deal with the role of the electric car in the climate transition.

2. Implementation and approach

In this chapter I will explain which methods I have used to collect and read my data, consisting of semi-structured interviews and textual analysis of news articles in Dagens Nyheter. I will also explain the analytical approaches of sociotechnical imaginaries, identity, ontological security, and an interpretation of the agrarian question which I have used to analyse my data.

2.1 Methodology

This case study is made with the focus to deepen the understanding of the experiences of a changing passenger car fleet among rural citizens and furthermore how this is represented by the media. A case study is a strategy, in which a researcher focuses on, for example, an individual, a group or a setting to deepen the understanding of the specific context (Robson and McCartan 2016). This can involve several methods of data collection, to get a wide representation of evidence concerning the studied phenomenon (ibid). In this case study the phenomenon, is a passenger car fleet in the transition from fossil fuels to electric vehicles, the actors are both the car owners and the media (Dagens Nyheter) and the context will be the car owners place of residence in central to northern Värmland and also the media context, in which the car owners acts. This is a qualitative study that are based on a social constructivist world view, meaning that the basis of this thesis is that all knowledge is created by humans, in interaction with other humans (Creswell and Creswell 2018). This means, that individuals have, in one or another way, built their knowledge of a phenomenon in relation to other individuals. My goal throughout the work with this thesis, has not been to verify my own preconceived notions, rather question them. As Flyvbjerg (2011) describes, the only way of understanding viewpoints of social actors is to place oneself in their context and listen. That is what I have done, and new insights has been welcomed, and as Flyvbjerg writes *"researcher who conducts a case study often ends up by casting off preconceived notions and theories"* (ibid p.310). According to Fontana and Frey (1994) the researcher interprets the interviews automatically when looking for patterns and themes, meaning that the analytical process has been going on ever since I started collecting my data.

2.1.1 Selection of participants

I have conducted my interviews in central to northern Värmland, located in the south-west area of Sweden, next to the Norwegian border. The search for participants started in January by making announcements in local Facebook groups. It turned out to be very little interest from Facebook, I only got in contact with one of the participants through Facebook. Then I decided to start contacting friends and acquaintances, to see if they had any potential participants in mind. With this said, I want to highlight that some of the participants are acquaintances of mine, which can affect my data. But above all, that has made the interviews more relaxed and there has been a trust between me and the participant from the beginning. It has also been a joyful journey, where I have met people that I have not seen in a while and a possibility to discuss the issues that we never had discussed before. I ended up with six participants, where five of them were acquaintances, or friends of acquaintances. The participants are within the age span of 28-36 and own at least one car. They have different occupations and level of education, and live different lifestyles. The wide range of participants has been a conscious choice to try to show the diversity of citizens that live in rural areas in Sweden.

2.1.2 Interviews in Värmland

I have conducted the interviews in Värmland, both because I have a relationship to the place since I grew up there. But also, because I know the car culture there, which consists of many people being interested in old American cars or cars in general. It is not unusual that people in Värmland have “cruising with their car” as an interest.

During the interview process of this study, the data formed the outline of the thesis along the way. Meaning, that the idea I had from the beginning differ from the result I ended up with. Creswell and Creswell (2018) state that this is a natural part of many qualitative studies. I carried an interview guide with me during the interviews, but since the interviews were semi-structured, there was room for variation between the interview occasions (ibid). Semi-structured interviews are often characterized by open-ended question, which makes it easy for the interviewee to give reflective answers (ibid). The interviews in this case study are inspired by phenomenological research, thus I have collected data about the lived reality of a phenomenon (Creswell and Creswell 2018). Interviewing is a balancing act between sticking to the topic, and at the same time giving space for reflection. In an interview situation, the role of the researcher is to understand what is being said through engaging in the reality of the interviewee (Robson and McCartan 2016). Therefore, it is important to be transparent with the research process of the study, thus the results are not measurable, meaning that a similar study made by another researcher might turn out different. This can be understood as the interview situation is an interaction

between the researcher and the interviewee, where a certain reality appears. Another researcher might get other answers. With that said, it does not mean that the researcher tells lies or made-up stories, it is about the researcher as a detective, searching the material for potential clues to find answers to the research questions (Fontana and Frey 1994). During my interviews I used my phone as a recorder and made field notes in a notebook. Then I transcribed the recordings, which made the interviews easier to analyse. I have conducted interviews with six participants at five occasions. Two of the participants were a couple and were interviewed together. All participants have received new names in the study, out of respect of their privacy. Before the interviews I told the participants about the aim of the study, while doing so I tried to not reveal too much of the research questions and my analytical tools. Thus, there is always a risk that too much information will steer the participants to talk about things the researcher might find interesting (Creswell and Creswell 2018).

2.1.2 Textual analysis of Dagens Nyheter

Dagens Nyheter (DN) were first published in 1864 (Dagens Nyheter n.d) and the newspaper is described as an independent liberal daily morning newspaper (Nationalencyklopedin n.d). I chose to analyse articles in DN because it is one of the largest newspapers in Sweden.

The examined news articles from Dagens Nyheter covers a period from July 1st, 2021, to February 20th, 2022. The period is an active choice as it has been a time where the fuel prices have risen sharply. I went no longer than to February 20th to prevent articles related to the Russian invasion of Ukraine, since prices rose even more after the invasion, but for reasons other than those previously mentioned. I have selected and read 40 articles that are related to the search words “petrol”, “diesel” and “electric cars”. I chose to read different types of articles including editorials, news reports, and debate articles. I have avoided reading letters to the editor, as the intention is to analyse what the journalists in DN write about, not the what the readers of DN wants to say. To find news articles I used the media archive Retriever (Retriever n.d). Through the media archive I could find articles within a certain time frame, with the key words I were searching for. Using the textual analysis as a method has given me a freedom in the interpretation of the articles. According to McKee (2003) the difference between “just” reading a text and analysing a text is the interpretation. The textual analysis has been going on ever since I started reading the articles. I have framed some of the most common issues that I interpreted as common and interesting. Then I categorized them using themes in a document. The textual analysis is described by McKee as a mixture of many methods of interpretate texts, where nothing is directly right or wrong. If I had

instead chosen to do a discourse analysis, for example, I would have been more limited by certain frameworks that are peculiar to that analysis method.

2.1.3 The participants

I have interviewed six car owners from central to northern Värmland. Out of respect for the participants and their privacy they are anonymized with pseudonyms instead of their real names. This is addressed as an important part of qualitative research by Creswell and Creswell (2018). The participants were also informed that they can withdraw their participation if they change their minds about their participation before the thesis is finished. I have also strived to highlight a wide range of perspectives from the interviews, to be able to show the diversity of opinions and feelings attached to the subject (ibid). The participants and their views will be presented in chapter four, empirical findings.

2.2 Theoretical concepts

In this section I will present the theoretical tools I have used in this thesis, which is sociotechnical imaginaries, identity, ontological security, and a remake of the agrarian question. In a study of rural areas there is an important aspect of power that need to be addressed. Hansen and Pain (2019) assert that power relations affect the way we see rural development. According to Rönnblom (2014), rural areas are made through policy documents and are marginalized in favour of urban areas. Meaning that urban areas acquire more of the society's common resources while rural areas are seen as problematic places that need funding, not investment. With that said, this is not a thesis that aims to address the power relations between the media and the citizens. Rather it is a thesis that aims to address the perspectives represented in the media and by citizens using the following concepts.

I will use "sociotechnical imaginaries" as a theoretical approach to be able to focus on what is being said about technology, and how visions of the future contain technical solutions. Milkoreit (2017) writes that we need a *collective imagination capacity* to be able to make a change in our society, she points out that "*imagination lies at the heart of social change, but its casual role and social function are poorly understood"* (ibid p.2). The theory of imagination is linked with people's thoughts and social interactions, which create collectively shared visions of the future of our common world, which can be seen as a collective imagination. In the end, these collective imaginaries affect the social and political decision-making meaning that the accepted imaginaries consist of a power dimension (ibid). Jasanoff (2015) argues that our common imaginaries dictate what is good and evil in our society, how life is "ought, or ought not to be lived" (ibid pp. 5–6). Meaning that there are

normative ways of looking at the future. Common imaginaries on technology can be that "the future is electric" and therefore you should use technology that runs on electricity and avoid fossil energy. Another common imaginary can be that technology keeps improving and that the future will keep on offering new solutions to arising problems in society. Therefore, imaginaries shape the future in a certain way and constitute what is desirable. According to Mutter (2018) the sociotechnical future imaginaries steer the wheels of development in the transportation area. Mutter proves through a study of Swedish policy documents that there is a gap between the aims from the government and the perspectives in the public sector. Where sociotechnical imaginaries determine which vision becomes reality, meaning that power institutions like the government have a big impact in what imaginary that constitute the future. As for now, the new electrification strategy that were shortly presented in the introduction consists of an imaginary of an electrified passenger car fleet. According to Jasanoff (2015) the connection between the imaginary and the technological development are crucial. In this connection it lies priorities, meaning that some technological solutions are prioritised over others. The desired futures are addressed through sociotechnical imaginaries in policy documents, in the discourse of certain power institutions, by the media and by the public. These together creates a common idea of what the future will look like. A common sociotechnical imaginary. In this thesis I will use this analytical tool to see what sociotechnical imaginaries that are prioritized and addressed by the journalists in DN and what perspectives that arises in the interviews.

Furthermore, I will use the theoretical concept of "ontological security". One of the core ideas of the ontological security is that people create order around themselves to become safe within themselves. Giddens (1991) claims that ontological security is a sense of having things under control. Meaning that a person wants to have a sense of reliability in both other people and things to avoid uncertainty. Additionally, Giddens argues that the individual has a practical mind and a discursive mind. The practical mind makes people create routines that come naturally to them, for example eating the same breakfast every day, brushing their teeth, or driving to work. People repeat these routines to the degree that it feels like it is natural to do so. The discursive mind on the other hand, is the reflective mind. This is activated if a person needs to be aware of what he or she is doing, when a routine is changing or something new must be integrated in the person's life. The ontological security is needed for people to not constantly question the world around, the creation of patterns and routines are a crucial part of feeling safe and secure in the world.

The next theoretical concept is “identity”, where I will mainly focus on role identities and social identities. An identity is what we use to difference us from others, it can create a feeling of being a part of something. Identity is shaped by roles in society, by a particular social group or by the individual’s own claiming of certain characteristics (Burke and Stets 2009). Identity creates a relation to the world, and individuals live their lives in a way that confirms their identity. Together, all individuals create social structures where there are social norms that constitute what are “allowed to happen” within these structures (ibid). In the structures where an individual acts roles emerge, and various roles create various identities, meaning a person can have many identities linked to different roles. Furthermore, social identities are described as created in relation to others in a certain group, for example when being part of a political party or being a member of a certain association. The social identity becomes a reference and a guide in social situations. The difference between role identity and social identity can be explained as role identity is the same thing as being “a worker” or “a wife”. Social identities on the other hand are for example when someone is “a social democrat” or “a soccer supporter”. This study is not focusing on personal identities, which are described by Burke and Stets as what makes a person feel unique and distinct compared to others. Meaning, what a person chooses to do regardless of their roles or social identities. This study is focused on the creation of we, where I will try to look for role identities and social identities in the participants relation to the subject studied, instead of focusing on the me, which would need a deeper understanding of personal identities. I will use identity as a theoretical concept to seek an understanding of what a changing fuel-sector and a changing passenger car fleet might do to the identity of rural citizens.

Finally, I will use the concept of “the agrarian question”. The concept has sprung from Marx, among others, and the criticism of the capitalistic system (Akram-Lodhi and Kay 2010). The agrarian question gives the researcher a possibility to immerse in the process of the separation of peasants and their land during the process of globalisation (ibid), which in this case study can be seen as the seperation between rural residents and the land. Meaning that the capitalistic system at some point has forced peasants into labour work, and that different societies are at different places of this process (ibid). In a Swedish context, the amount of people living off their farmland dropped significantly during the 20th century (Swedish Board of Agriculture 2011). This means that the structures of agriculture have changed, where fewer and fewer people work as full-time farmers. In some areas of Sweden, the available land is not used for food production but instead are taken care of by those who want to keep the landscape open. This discussion is relevant for this study because of the location of the participants. Central to northern Värmland is known for its landscape which consists of lakes, forests, and smallholder areas. 58 percent of the productive arable land in Värmland is used as grassland and

roughage, compared with the national average of 42 percent (LRF 2016). Meaning that compared to some other areas in agricultural Sweden the level of cereal cultivation is lower in Värmland, while the grasslands and roughage is more common. Regarding the reduction of farms with an active agriculture business in Sweden, this has also affected Värmland. However, there are still small agricultural units left, but significantly fewer small holders than in the 20th century. The small holders that are left often have other main incomes or at least supplementary income.

To put this in the context of this study, I have seen a possibility to translate the concept of "the agrarian question" into "the rural question". I will seek an understanding of rurality in terms of transportation, which is a question with many layers. Rural areas and agricultural businesses both require innovation in the transportation sector. While the agrarian question captures the problem of the gap between small farmers and capitalist agriculture (Akram-Lodhi and Kay 2010), the rural question captures the gap between the rural inhabitants and the actors who influence the place where they live. I see a possibility to address the rural residents as caretakers of nature, without being either farmers or working in the "green sector". Rural inhabitants might use different kinds of fuel driven vehicles to be able to take care of the place where they live. The Swedish rural areas are inhabited by a diverse group of citizens, from office workers to industrial workers, to health care professionals and farmers. What all of them have in common is their life in rural areas, which often entails some responsibility for nature. Some of them might own land, while others might have old farm buildings on their plot that needs care. Some might own a tractor or a machine, which they use to take care of the nature surrounding them. In Sweden, all rural residents live in an agricultural context, even if they are not farmers themselves. The areas which are not managed by the rural residents themselves (who are not farmers), are managed by farmers, forest owners, associations, authorities, or the municipality. This means that "the rural question" consists of many actors working together to make the rural areas both beautiful and useful in a "capitalistic world". The care of the surroundings in rural areas is largely dependent on machines powered by fossil fuels, weather you are a farmer or "just" a rural resident. The rural question considering sociotechnical imaginaries will be discussed in chapter 4.

3. Empirical findings

In this chapter I will present the empirical findings from the interviews in Värmalnd and the examined articles in Dagens Nyheter.

3.1 Perspectives from Värmland

I will begin this chapter by presenting the six participants and their views. They live in different places from central to northern Värmland. All participants are in the age span from 28 to 36 and have different occupations and life situations. I have interviewed them at different times during the period of February to Mars 2022. Their names have been replaced out of respect of their privacy.

3.1.1 Johanna in Torsby

I called Johanna an afternoon in March. It was a short interview lasting about 30 minutes, but there was no lack of perspective during that time. Johanna is a 31 year old, driven citizen, who has just become a mother. She is currently studying to become a police officer while she also engages in the local gym as an instructor. She lives in central Torsby in Torsby municipality, northern Värmland. Johanna said that the best part of living in Torsby was that "*here you get the feeling that you can make a change in society, you are not just a little ant in an anthill"*. Furthermore, she said that it suits her well to live in central Torsby, *"especially now when the fuel prices have risen and we have to cut down on our trips"*, she stated.

Regarding the fuel prices, Johanna said that she and her partner recently were thinking about buying a new car, but when the prices on fuels got higher they decided to buy an electric bike instead. At the time of the interview Johanna said that it costed her around 1500 Swedish kronor to refuel her car, and she commented on that by saying:

> During my ongoing parental leave, my finances have been noticeably affected by the increased prices. We have had to change our habits, and fortunately, we have been able to do that because we live where we live. It is harder for people living outside the village (tätort).

When Johanna said that some of her car related habits had changed due to the rising fuel prices, I asked her if there has come anything good out of it. She said "yes" and explained that they no longer do "the lazy-travels", as she called it, which she refers to as travels where they easily can walk or ride a bike, but out of "laziness" used to take the car. She did not see that as a bad thing. The fact that Johanna lives in central Torsby, and has a short bike ride to stores, makes her life less car dependent. However, Johanna also told me that she has cut down on visits to her parents, due to the rising fuel prices, which she thinks is sad. A large part of her family lives 40 kilometres away. Johanna also talked about her friends. She explained that almost all of them lives somewhere else, outside Torsby. Therefore, she must use her car when visiting them. Johanna stated that social life in rural areas, in general, is very car dependent, and said:

> People live with more distance to each other here, and in places where public transport is very limited. So, if you want to visit someone you must use your car. Luckily since I live in central Torsby, people might drop by when they are in Torsby for other errands.

Furthermore, I asked her how she imagined the future of transportation in Torsby and she answered:

> I think people will drive less in the future, but in a place like this it will never be eliminated. We will always need to get around. In areas like these we are very dependent on our cars.

Johanna also stated that the car is not especially interesting to her, and if it was possible, she would like to travel less. The the need to get around is nevertheless crucial, and even though Johanna and her partner have bought an electric bike, they are still thinking of buying *"a small extra car"* to use when the other car is not available. When speaking of new cars, I asked her if they were interested in electric cars. Johanna said that her partner has been interested in buying one, but *"he realised that it was too expensive"*. According to Johanna the problem was that the secondary market did not offer enough electric cars, and a brand-new electric car was too expensive. The need for a second car was explained by Johanna by the following quote: *"it would feel safer to have two cars, if one of us is away with one car, the other one is available"*.

Johanna shares the feeling that two cars would make life easier with the next participant of this study, Emir.

3.1.2 Emir in Lekvattnet

Emir, who lives in Lekvattnet, 23 kilometres north of Torsby, owns one car together with his partner. Lekvattnet is a small town with around 260 inhabitants, Emir told me. Emir works as a dentist in Torsby and he and his partner moved to the municipality for work, and to get closer to nature some years ago. He stated that it is their first time living outside the city. They to Värmland from a bigger Swedish city, and after living in central Torsby for a while, they moved to their current home in Lekvattnet for about one year ago, at the time of the interview.

Emir talked about the differences in their life in the city compared to the life they live in Lekvattnet. He pointed out the social life as the main difference. In the city the public transport *"leaves every ten minutes"*, Emir said. In Lekvattnet you need to bring your car to social events, which means that you need a sober driver for the night if you would like to have a glass of wine. I asked if he could picture their life without a car living in Lekvattnet, and Emir answered *"no, not here. But if we had stayed in the city, we might never had bought a car, but here you need it"*. Emir also stated that the ideal would be to have two cars, because life is complicated when you only have one car in a household of two. Him and his partner often travel together to work, they ride together when they can, other times they pick each other up after work. It all depends on their schedules.

When they first moved to Torsby municipality they lived in central Torsby. Back then, they did not need a car as often. Emir said they saw their need for a car when they realised that they could not do the things they moved to the "countryside" for without one. For example, they like to go skiing, which is a car drive away.

Emir sees himself owning an electric car in the future, but he doubts the capacity of them mainly because they have a reputation for not performing as well in a colder climate. Emir points out that the winter in northern Värmland can be very cold with a lot of snow. He also mentions that his house is located uphill, which means that it is a long drive on steep roads. But he also said:

> I think we will own an electric car in the future. But now they are too expensive, at least the ones we need for the climate here. Which is a strong and durable car.

He says that the electric cars with the performance he needs are very expensive. Related to the question about electric cars, I asked Emir what he thought about the future of transportation in Lekvattnet, he answered:

> I do not see how the habits can change here; you are dependent on the car. I don't even think there will be carpools here in the future. Everyone has their own car, so there is no need for it.

He compared the situation he explained with the situation in the cities, where carpools are common today, *"and will become even more common in the future"*, Emir thinks. To Emir it feels natural to use public transportation and trains when it is possible, a habit that has stayed with him from life in the city. He said:

> Everything we do now, we need the car for. But if we take longer trips, we usually go by train. We do not find it especially fun to drive. It is much more comfortable to take the train.

Emir also pointed out that the great interest in cars that were very visible when he first came to Torsby was "*completely new*" to him. *"Every night there is someone out cruising with their car, with loud music on"*, Emir told me. That brings me to my next interview, that I had with Karl in Lysvik. He might be one of the car enthusiasts that Emir has seen cruising around in an old American car in Torsby.

3.1.3 Karl in Lysvik

Karl moved to Lysvik from a neighbouring municipality in 2011. He is 30 years old and a great car enthusiast. Lysvik is a parish in Sunne municipality, with around 1700 inhabitants (Sunne 2022). I interviewed Karl over the phone during his car ride from northern Sweden to his home in Lysvik. It was a long car ride, which is normal for him because of his job, he said. He told me that already this year (2022) from January to the time of the interview (in the middle of February) he had driven 20 000 kilometres in work-related travels. Karl works in the rally sport and has a strong relationship with cars, both through his job and his spare time. Karl pointed out that a car is more to him than a vehicle that takes you from point A to point B. He talked about human senses, and that a car ride can contribute to certain smells, certain sounds, and feelings. When I asked him about electric cars he said:

> Electric cars are a good thing in general, but for those who are interested in engines, there is something missing. The interest in engines is a lot about our senses that we have in our human body

Furthermore, Karl's stated, that for him the question of fossil fuel prices is a *"non-question"* in the upcoming election in September 2022. Instead, he thinks that there are other sectors in society that are suffering, like haulage companies and other truck related companies. He also questions the current government's ambitions to electrify the transportation fleet. Mostly because he cannot see how the habits in rural Värmland, and other rural areas, can change in that direction. When I asked him why he thinks that, he answered:

> We cannot use fossil fuels to the extent that we do today. But I think it is better to have more solutions than just one, I do not think it is a good idea to completely dispose of fossil fuels and only invest in electricity. Other fuels are also needed

He highlights the fact that rural areas are car dependent and says:

> You must have a car, and not only one, preferable you want to have two or three cars. Otherwise, you will get nowhere

When I asked Karl if he thinks that he will own an electric car in the future he said, *"it would not surprise me"*. He states that it is not the electric cars in themselves he does not like, but the general focus that one thing is the solution for everything. Karl mentions neighbours who are farmers, friends who have haulage companies and people who has the cars as an interest and/or a job, like him. Therefore, he does not see how the internal combustion engine can be phased out without making life in rural areas hard, and states that it is not the internal combustion engine that is the problem, but the emissions. Karl also said that he finds it strange that power institutions like the government claim that the car fleet is a major source of emissions, while air planes and boats are allowed to run as usual. In the end of the interview Karl stated:

> As long as it is possible to drive cars with the fuels that are offered at the stations today, I will continue. I think it is fun as hell to drive my car, they will need to drag me out of it to make me stop

Karl did not worry that much of the rising fuel prices, he felt that he could still afford his lifestyle. Someone who did not feel that he could afford the rising prices was Robin in Vitsand, whom I will present next.

3.1.4 Robin in Vitsand

When I arrived at Robin's place in Vitsand, 23 kilometres north of Torsby, he was outside by his house taking care of his old forestry machine. We said *"hello"* and he told me that the machine he was standing by needed some greasing. Robin and I knew each other in senior high school (gymnasiet). Today he is a father and owns a house together with his partner in the village where he grew up. He works full-time in a factory in Torsby and is also hired as a part-time firefighter at the local fire station. It lives around 130 people in Vitsand, Robin said.

When I interviewed Robin, he was on a two-week parental leave. While his son was showing me his favourite toys, Robin gave me a cup of coffee. During the interview, Robin stated that, "you *and I probably have completely different views on things"*. His unfiltered way of talking was one of the reasons why I reached out to him. The other reason was that he had shared some content from the Facebook group "the fuel uprising" (Bränsleupproret) that I had seen. I thought that he might be able to tell me something about his experiences of anticipated changes of the passenger car fleet.

Robin puts a high value in his machines and his car. He wants them to last as long as possible and drives them *"until they more or less fall apart"*, as he said. He said that he views the material things that way because he cannot afford a new car or a luxurious house. He said:

> A modern car or a modern machine is expensive to maintain. To get the service done. You cannot do everything yourself. An old machine needs engine oil, some alcohol for the compressed air brakes and some grease, then it works fine for a long time

When the fuel prices in Norway became cheaper than in Sweden, Robin started to travel across the border to refuel his car. He said that: "*with the exchange rate there is a there is a difference of eight kronors between Norway and Sweden now"*. His Volvo runs on petrol, and he needs diesel for his forestry machine. Robin said that he has done *"some testing"*, and that the Norwegian diesel works better in his forestry machine than the Swedish diesel. Robin explained that it is because it is less reduced with biofuels. He also added that his forestry machine consumes twice

as much fuel when it runs on Swedish diesel, compared with the Norwegian diesel. He continued by saying:

> New machines would probably deal with the Swedish diesel better because they are designed for other kinds of fuels, but the old machines need thicker diesel that lubricates the engine

When I asked Robin what he thought about electric cars, he answered:

> The electric car generally works in the cities, but what happens if you run out of battery here? If it is windy and trees fall over the road, and you must wait for a long time. How do you deal with that if you have an electric car?

He could not imagine a future with only electric cars in Vitsand and Torsby. He laughed and said that he would like that to happen, but he questioned who will take the responsibility to make sure that the infrastructure for the electric cars will reach the rural areas. He also referred to the previous trend which consisted of ethanol cars and stated that that was not a success story because *"who uses ethanol today?"*. Robin also questioned people living in urban areas by saying:

> Why do people in cities drive SUVs with four-wheel-drive? I do not even have a car like that, and I live in the middle of the forest. They should be fine with driving a small car, maybe a small electric car

Before ending the interview, I asked Robin if he has any worries about the future. He said:

> My biggest worry is that I might have to move from this place in the future, if this (rising fuel prices) continues. I do not want to move, but it feels like we, who live in rural areas, are being punished for choosing to live where we live

Robin showed a clear frustration that his life situation is affected by decisions made by the government. Decisions that are made for the climate – *"but without a thought of rural areas"*, as Robin said.

3.1.5 Helena and Marcus in Ransbysätter

It was a Friday afternoon when I sat down at the kitchen table in Helena's and Marcus's house. They offered me some freshly baked cinnamon buns and coffee and started telling me about their life on their newly bought farm. It is a small farm with older farm buildings and some arable land and forest. They bought the place in the fall of 2020 and moved there in February 2021; at the time of the interview, they had lived there for around a year. They told me that the goal is to be able to realize dreams and projects, and they have already started the plans of installing solar cells on the roof of the farm buildings. Helena says, *"the hope is that we will be quite self-sufficient in electricity, and to some extent food"*. Helena's family also lives in the village. So, for Helena it felt like moving *"back home"*.

Helena and Marcus moved from living in a rental house on another farm located around four hours from where they live now. Therefore, the move to Ransbysätter was not a very big change, at least not in terms of lifestyle. *"It is actually closer to the things we need to travel to now, compared with how it was before"* Marcus said, and Helena agreed. Helena stated that the distance to work is decent from where they live now and said:

> I commute every day, thirty minutes one way. But like I said, I do not think it is that far to Sunne. You turn the audiobook on or listen to the radio, and then you are there. It is not a long ride

The commuting time is not the problem, what is noticeable is that the fuel prices have risen, Helena says:

> When you check your wallet at the end of the month it is a lot of money that ends up in the tank of your car. So, I ask myself; what happens if it gets even more expensive? How will we then be able to go to work as we do now?

Helena and Marcus own two cars, one SUV and a small commuter car. Marcus commutes long distances to work, as he works as an excavator operator. The projects he is involved in often change location, which means that he always works away from home. When I asked them if they have any plans on buying a new car, they told me that they have thought about buying an electric hybrid. I ask them why they are not considering a fully electric car. Helena answers:

> It feels hard to have an electric car here because we sometimes travel long distances. I would worry that we might run out of electricity somewhere. Instead, we have thought about buying

> an electric hybrid, so that we can be assured that we get home, instead of getting stranded somewhere along the road

Marcus fills in saying *"our goal would be to drive as much as possible on electricity but have a backup if we need it"*. They both see the electric cars as something good when it can be a part of a complete solution at the farm. Helena says:

> We see a possibility to combine our future solar cells with an electric vehicle, to get a complete solution with our electricity. I have even heard that you can use your electric car as a battery, to store energy for your house, for example

When I asked them if they can see a life without a car, they both said that it would be a very challenging life. Marcus also said:

> The car is also a safety for the two of us if we need to go somewhere for some reason. I cannot see a life without a car here

Just as Robin in the earlier interview, Helena and Marcus also have an older machine, a Volvo tractor. Helena says, "*we need the tractor to get the job done here at the farm"*. The tractor they have is enough for the work Helena and Marcus does on the farm, they said. Marcus adds:

> We will always need a car. Maybe it will be an electric car in the future. But as we said, we will still need fuel for our tractor, also in the future, especially during the hay run

They told me that there is a lot of unused farmlands in the area that needs caring, and they have the interest to do it. For many of my interviewees the fossil fuels are more than just personal vehicles. It is about the need to "get things done", which requires other vehicles such as tractors, pickups or forestry machines.

3.2 Perspectives from Dagens Nyheter

In this section I will present the findings from the literature review of Dagens Nyheter (DN). I have read 40 articles related to petrol, diesel and electric vehicles. The articles cover the period from July first, 2021, to February 20th, 2022.

3.2.1 A summary of views in Dagens Nyheter

Lower the fuel prices or focus on charging stations?
One of the findings in DN is a critique towards the elected politicians for not taking the reduction obligation more seriously. It is a matter of a change in attitude towards the reduction obligation and how much biofuel that from now on ought to be mixed into the fossil fuels. In one leader article, the critique is pointed towards the parliamentary parties the Left Party (Vänsterpartiet), the Moderate Party (Moderaterna), the Christian Democrates (Kristdemokraterna) and the Sweden Democrats (Sverigedemokraterna). The party leaders are peaked for being too weak in their politics regarding the reduction obligation, and the actions it requires. It is said, in another article, that in 2021, all parties, except the national conservative party, the Sweden Democrates, voted for stricter requirements of the reduction obligation. Many journalists and writers in DN are critical of listening to movements that advocate for reduced prices of fossil fuel, and it is explained as a form of right-wing populism, a "diesel-right". In one leader article the expression "sparsely populated area-trap" (glesbygdsfälla) arises. In the article it is stated that politicians end up agreeing with the *"disappointed voices from rural areas"* when they start to change their direction considering the reduction obligation. The writer also wants to put rural areas in another light; that, *"electric vehicles are more common in rural areas than in cities today"*, which is a statement for which I cannot find evidence. The writer wants the discussion about rural places and vehicles should be more about charging stations, than about how to compensate car owners for high fuel prices. Another article states that the life in rural areas is heavily dependent on cars. Therefore, the frustration of expensive gas is understandable. The writer then states that frustration is not enough reason for the prices to go down; instead, the issue should be solved in another way. The same writer argues that it must be another story told about rural areas, instead of the one about "*fuel-populism"* and raises an example that the numbers of electric cars bought in rural areas are increasing. Like the previous writer, this writer too mean that the media should be more focused on issues like the lack of charging infrastructure in rural areas. In an interview in DN a lady stated, *"I have always thought fuel has been too expensive, ever since I started driving in the 1980's"*. While another said that she thought the fuels were expensive but that she also understood that it is for "*a good cause"*.

The transition towards an electrified passenger car fleet

There are many actors involved in the transition towards an electrified car fleet. In DN, there is a pattern of good faith in the industry appearing. The main critique is targeted towards politicians, while the industry seems to be cheered on in their development of future technologies. One article explains how the industry plan to phase out diesel and petrol from the passenger car fleet. In the article it is explained that the car industry must change because of the EU-goals. It is written that *"car manufacturers must stop selling cars with internal-combustion engines before 2035, at least if they run on diesel or petrol"*. It is stated that it is not the internal-combustion engine that is the villain, it is the carbon emissions. In another article the problem of range is brought up and the writer states, *"the car manufacturers turn in and out on themselves to get a few extra kilometers of range"*. One problem mentioned is that the car industry often exaggerates how far the electric cars can run on one charge, which creates a distrust of the electric car's capacity among customers. The same article presents vehicle enthusiasts measuring and testing how far some new produced electric cars can run on one charge, how comfortable they are to drive, and so on. Further, there is an article from December 2021 about how Sweden is slow at implementing EU directives. The government has pointed out the public sector as an important sector to focus on in the transmission towards lowered carbon emissions. But again, it turns out that politicians "are failing in achieving the goals" according to the article.

In this chapter I have presented the findings in Dagens Nyheter and the interviews in Värmland. In the following chapter I will use these findings in a discussion, using the theoretical concepts presented earlier in this study.

4. Discussion – the rural question of sociotechnical imaginaries

4.1 Sociotechnical imaginaries

As stated in the introduction, Sweden has the goal to become an emission free welfare state by 2045. The past years have been progressive in the electrification of the private transportation fleet and the popularity of the electric alternative is rising. At the same time, there are still very few electric cars in traffic today. Only six percent of the passenger car fleet consist of electric cars or electric hybrid cars, where the hybrids are most common of the two. In the examined articles in DN, there is a positive attitude towards an electrified car fleet. There are not many articles that call for greater investments in alternative fuels. I interpret this as sociotechnical imaginaries being a part of how journalists write about the future of the passenger car fleet, and that it is mainly the electrified future that gets attention. However, in one article it is stated that "*it is not the internal-combustion engine that is the villain, it is the carbon emissions"*. This quote is also appearing in one of the interviews in Värmland. Meaning, that it could be a more intensive discussion about alternative fuels in the media than there is today. The transport sector is one of the largest sources of carbon emissions in Sweden today, meaning it should be room for all climate-friendly perspectives in the future imaginaries of the society. It seems to be a gap between the electric car enthusiasts and those who advocate for the internal-combustion engine and its future in a fossil free society. This gap may represent that there are different sociotechnical imaginaries which determine what technology the society will invests in. Overall, it is the electrified future that is the most common imaginary of this study. Both the participants in Värmland and the articles in DN are neutral or positive to the electrification of the passenger car fleet. What distinguishes the interviews with DN, however, is that some of the participants were completely sure that the electric car will not be the most used vehicle type in rural areas in the future, but instead it will be alternative fuels that will be the future of car driving in rural areas. This is somewhat similar to the points made by Mutter (2018). She addresses a division between the policies made by the government and the opinions of actors in the public sector. She discusses that

participants in her study, who for example were representatives from the public sector, wished for more *"technologically neutral policies"* (ibid p.11), meaning that they wanted more representation of other future solutions for the transportation sector. In this study, the participants represented a more neutral imaginary of the future, which contained both electric vehicles and vehicles with internal-combustion engines, running on fossil-free fuels. In the examined articles in DN the advocated perspectives mainly consisted of imaginaries of an electrified future, and the writers urged politicians to build charging infrastructure in rural areas instead of lowering prices on fossil fuels.

The fact that many people are dependent on their cars, might be just enough reason to *think* something is too expensive. When I asked the participants if they had made any changes in their habits due to the rising fuel prices, there were some who said that they have. Robin told me that he drives as little as possible nowadays, which means that he still drives, but tries cutting down some travels. Johanna no longer does *"the lazy-travels"* which she saw as a good thing. Helena and Marcus told me that they were already quite good at *"not making unnecessary car journeys"*, even before the prices went up. Karl and Emir said that their car habits were the same as they have been. To some extent the rising fuel prices have forced drivers to plan their journeys more carefully. In the interviews it is however clear that car driving is the only way you can transport yourself when living in rural areas. Therefore, drivers must be able to trust their cars, just as people living in urban areas must trust the public transport they use to commute to work. Rural dependence on fossil fuels is a problem that is raised by both Newman (et al. 2014) and Haugen (2012). They question the great effort that is being made to make the urban car fleet electrified, while the greatest car dependence is in rural areas. None of the participants of this study could see themselves live a life without a car, while the answer would probably be different in a study made in an urban area, where alternatives are offered to the citizens. One of the participants questioned the fact that the industry continues to produce cars, that we are supposed to buy and drive, and that *"it feels strange that there are no requirements for behaviour change*". It also appears a scepticism towards trends in the fuel sector. One participant talked about the ethanol and said, *"it was great when it arrived at the market, but who drives on ethanol now?"*. The same scepticism emerged about electric cars, where there is a concern that it will be the same story as with ethanol cars. This does not make the participant into a technophobe or an opponent of innovations. Instead, it is a statement that underlines that all technology that has been seen as a success from the beginning, has not been successful when it has been put on the market. Citizens remembering other technological "slips" is something that is discussed by Felt (2015). She argues that sociotechnical imaginaries have a dimension of power struggles between new technology and citizens. Felt mentions that citizens remember past experiences of technological investments when they consider

continued developments of the same type. Therefore, it might take some time for citizens to adopt to sociotechnical imaginaries that are advocated by power institutions such as the government.

4.1.1 The avoidance of populism

In the examined articles in DN, politicians are accused of *"fishing for voters"* when they acknowledge the discontent of the high fuel prices that are expressed by "the fuel uprising" (Bränsleupproret). I have interpreted this as journalists being afraid of being associated with right-wing movements that deny climate change. This can be seen as a deeply political dimension of the climate change, where journalists in DN tend to avoid the perspectives from "right-wing movements". Meaning that, a discussion about, perhaps lowering the fuel prices cannot be reconciled with the journalists' willingness to work for the climate. Politicians seem to find it easy to change their minds in terms of the reduction obligation (the law of mixing biofuels in fossil fuels), while the journalists advocate that the most important thing is to *not* lower the price of fossil fuels. Instead, journalists in DN want politicians to invest in new technology, which in rural areas mean an investment in more charging infrastructure. The writers in DN show empathy for rural residents who refuel their cars with expensive fuels, but the solution of lowering fuel prices seem to be out of question. Jasanoff (2015) means that there are normative ways of looking at the future, where something ought to be one way, or another, for being seen as good or bad. In DN, the norm appears to be that one must write about clean energy solutions in a positive way and reject fossil fuels and movements that advocate for lower fuel prices. Felt (2015) addresses the relevance of asking the citizens "how" they see the new technology, and why they have issues with it. Meaning, it is better to hear what the resistance consists of, instead of ignoring that it exists. In terms of fuel prices in Sweden, there is a risk that the dissatisfaction will increase if the perspectives from the car driving citizens are avoided. In the examined articles in DN it appears some advice from a journalist to the government; to expand the charging infrastructure in rural areas instead of lowering the fuel prices. The reality is thus that very few rural citizens drive electric vehicles. And if they do, they probably have a charging station at home.

4.2 Ontological security and identity

There is a division between DN and the interviews in this study, in what is being said about the phasing out of fossil fuels in favour of more environmentally friendly alternatives. In DN, it appears that the reason why the electric cars have not reached the wide public yet is due to a lack of charging infrastructure, and that the electric cars are too expensive. This is to some extent consistent with the concerns of the interviewed participants, at least considering the prices of electric cars. Two of the

participants said that they would probably own an electric car today if they could afford one. However, the most recurring perspective from the interviews is about lack of trust in the performance of electric cars. Thogersen and Ebsen (2019) write that the attitude towards electric vehicles affects the willingness to own one. In this study the participants who were interested in electric vehicles were not sure if they could trust the capacity of electric cars "yet", especially if they were looking at electric cars within their estimated price range. I was told that the cars with the performance the interested participants need for the life in rural areas were too expensive. The "yet" is though important, as this indicates that they believe that the technology *will* be improved and become cheaper in the future. Meaning, that the technology they need eventually will be available for them. The analytical concept of ontological security is relevant to understand the doubtfulness towards new technology. Ontological security is a feeling of "having things under control", and a feeling of knowing oneself (Giddens 1991). In the situation where someone must adopt to new technology the ontological security might be "endangered" for an individual. For many it is important to "know their car" as well as knowing your surroundings or your routines. Some of the participants expressed a concern of being out of control, for example *"if the car would run out of electricity"*. The expression *"what if the car stops in the middle of the forest?"* was addressed in two of the interviews. Of course, any car can stop in the middle of the forest, regardless which fuel are being used. The difference is that most people drive cars that runs on diesel or petrol, which are fuels that have been established for a long time. The driver therefore knows how to handle the car, what warning signs to look out for, and how to act in a situation when you run out of fuel. A fuel can might be just a call away. To know your car is also to be safe, it is a way of stabilizing your ontological security. This might be one of the reasons why car drivers choose to use technology that they already know.

Rotaris et al. (2021) argues that having knowledge about electric cars increases the chance that a person chooses to buy one. They also state that the level of environmental interest often determines the purchase. Meaning, it might be a level of identity in the choice to buy an electric car. A person's identity might be shaped by the environmental movement, at the same time as he or she wants to or needs to continue driving a car. Four out of six participants in this study did *not* identify themselves with the vehicle they were driving. Meaning, that it is just a vehicle that takes them from point A to point B. Two of the participants had a stronger bond to their vehicles. For Karl the car is a symbol of freedom and a deeply rooted interest, which makes the car and what surrounds it a social space where Karl gets to activate his identity as a "car enthusiast". He stated in the interview that it is possible to do *"all sort of things with a car"*, it can be a social space, for example, where you party and get together with friends. Karl highlighted the fun parts of car driving,

where cursing were mentioned and that different cars can evoke different parts of a person's identities.

In the interview with Robin, his role as “a fixer” that emerged. Robin identified himself as *“a person who like hard work”*. He likes to take care of the things he owns, which can also be seen as a sustainable lifestyle as well as driving an electric car. He addressed that a modern vehicle is more complicated to take care of, as they often need specialised workshops. Here I interpret a rural identity, where the role as a rural resident comes with a level of knowledge on how do things on their own. From developing the local community, to fixing a broken machine. In the interview with Emir, this was addressed as one of the *“exciting and challenging parts of living in a rural place”*. He explained that *“you need to know who to call when your driveway needs to be ploughed in the winter”* and that you must be more *“invested”* in your surroundings than when you live in the city. Regarding that, Robin may be the one other rural resident call if they need help in their forest, for example. This confirms Robin's identity as a person who enjoys hard work. With this said, it is important to underline that people are more than their individual identities. One person can have many identities.

4.3 The rural question and sociotechnical imaginaries

Two writers in DN address that the discussion in media often is focused on “fuel-populism”, while they believe it should be more perspectives on the “real issues”, which are explained as the need of charging infrastructure in rural areas. The reality is that rural areas are still heavily dependent on fossil fuels and thus also the internal-combustion engine. In one article in DN a journalist interviewed a car driver, who said, *“I have always thought fuel has been too expensive, ever since I started driving in the 1980’s”*. Perhaps it was said with sarcasm, but it says something about the drivers' attitude to the price of fuels. Since the car is a necessity for many, the price is "always too high" because it is a cost you cannot avoid. This does not mean that fossil fuels should be free of charge, but that the reactions to higher prices are not surprising.

In some of the interviews there is a greater belief in alternative fuels than in electric vehicles. This may be because fossil fuels are more than fuels for passenger cars in rural areas. For example, Helena and Marcus have ambitions to take care of the unused farmlands in their living area, and they worry about how the future will affect their situation. They use an old tractor that runs on fossil fuel, a tractor that is fully capable for its purpose on the farm. In that case the economic dimension is great, where a new and more modern tractor would be an expensive investment. The distance between rural residents and the arable land of the rural areas becomes

greater the fewer who can conduct small-scale agriculture because of the technological investments that is needed to do so. Sociotechnical imaginaries in the current society calls for expansive investments, such as electric vehicles and solutions for biofuel production on farms. Thus, it emerges a future where it will be even more expensive to have access to land, where there might be an increasing question of economic capital and an ability of being competitive in a capitalistic agricultural sector. To summarise the discussion above, Sweden has developed from an agrarian country to a modern welfare state during the 20th century. During this development, there has been a change in the citizens' relationship to the rural areas where very few live out of their land. This change in how life is ought to be lived has also changed the preferences in terms of technologies, where the electric vehicles is intendent to replace the fossil-fueled cars also in rural areas. However, rural residents often have rural-related interests or demands that may need stronger cars and alternative fuels, which makes rural residents' citizens who places higher demands on future technology than the average urban car driver. The rural question of sociotechnical imaginaries are therefore a question of performance and security in terms of what technology that will be offered in the future. And a question of how the new technology will benefit rural areas emerge. In the examined articles in DN I cannot find a perspective which highlights the rural perspectives in terms of what is needed there to enable reduced emissions, according to the citizens. What emerges, however, are the journalists' ideas about solutions, such as expanded charging infrastructure in rural areas, which might be a solution for the few rural residents that own an electric vehicle today.

5. Conclusion

In this thesis I have highlighted the concerns and perspectives from six interviews with rural residents in Värmland and from articles related to diesel, petrol, and electric cars in the Swedish newspaper Dagens Nyheter. Sociotechnical imaginaries emerge in both the examined articles, and in the interviews in Värmland, where the electrified future is the main perspective addressed in both, meaning that it is a common imaginary. However, the writers in DN express a distinctly positive attitude to the technical development towards an electrified car fleet, while there is a broader representation of perspectives expressed by the participants in Värmland. Among the participants there were some that did not see the electric cars as the main solution to the issues of emissions from the passenger car fleet, addressing rural areas as a places with certain needs considering transportation.

Two of the six participants address the internal-combustion engine as important and indispensable because cars are not only a means of transport, but also an interest and a "tool" in rural life. Electric cars are said to *"work for some, but not for us"* by some of the participants. This may indicate both an "endangered" ontological security, but also that living in rural areas is in many ways different from life in cities and that the rural question is one about what technology that will benefit rural areas in the future. The question of identity is also addressed, where I argue that the change from fossil-fueled vehicles to electric vehicle might have a level of loss of identity. Some of the participants of this study have a role to fulfil that includes fossil-driven vehicles, for example a "fixer" or "a helper" might need their fossil-driven vehicles to activate their identity. It is also a matter of social identity where the internal-combustion engine has its own "fan-club" in people interested in engines. For example, many people in Värmland are interested in old American cars, and cars in general. An interest gives people the chance to meet other people where their social identity as "a car enthusiast" are activated. This perspective is not talked about in the examined articles in DN.

In the examined articles in DN it also emerges a lack of perspective about possibly lowering the price of fuel. It seems like journalists in DN avoid meeting the voices from movements that wants to lower the fuel prices. I have interpreted this as

journalists being worried to be associated with right-wing movements, or “the fuel-right”. Perhaps this is because the journalists want to be associated with the positive technological development, where fossil energy is seen as something bad and the electrified future as something good. I have discussed this as problematic, thus listening to the citizens is the only way to prevent populism and resistance.

Finally, I discussed “the rural question” which is a reinterpretation of “the agrarian question” where I seek to highlight why rural areas need other, or more solutions, than urban areas in the technological development of the future. I argue that rural areas and its residents have another relation to nature, even though they do not work as farmers. Rural citizens might own a tractor, or farm buildings that needs care. Maybe they need a small tractor to be able to take care of the area they live in.

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Popular science summary in Swedish

Denna uppsats beskriver övergången från fossildrivna bilar till elbilar från ett landsbygdsperspektiv. Detta görs genom att jag först lyfter fram fem perspektiv från intervjupersoner i Värmland för att sedan presentera perspektiv från cirka 40 studerade artiklar i Dagens Nyheter (DN). Jag undersöker perspektiven genom att använda mig av fem teoretiska koncept, sociotekniska imaginärer, ontologisk trygghet, identitet och en omarbetad version av ”agrarfrågan” (the agrarian question) som jag kallar för ”landsbygdsfrågan” (the rural question). Jag har sökt samband och splittringar mellan perspektiven från intervjuerna och perspektiven i DN. Detta har jag gjort för att belysa vad som sägs och inte sägs i DN, och vad som sägs bland medborgare i en landsbygdskontext. Det framkom att det fanns en gemensam socioteknisk imaginär i DN och intervjuerna, den om att framtiden är elektrisk. Men det fanns också splittringar, där några av de intervjuade poängterade att det finns ett behov av fordon med förbränningsmotorer på landsbygden. Både för nöjets skull och för att landsbygden ställer höga krav på sina fordon, då vägarna är sämre och vintrarna är hårdare. Landsbygdsbor har också ofta intressen som kan innebära många vändor bil och släp. Sammanfattningsvis så beskriver jag att landsbygderna i Sverige behöver en bredd av framtida teknologiska lösningar där både alternativa bränslen och elbilar har en roll.

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