



LUND UNIVERSITY

# Understanding the Periphery

*An analysis of the shared experiences of outsiders in the use  
and non-use of systems and platforms*

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## Abstract

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The existence of systems has been essential in bringing order and providing benefits and security for people throughout the course of history. However there are cases wherein people have difficulties in adopting or conforming to systems. The aim of this study is to understand how systems that intend to be open encounter the paradox of excluding people in the process.

The Public Transportation Agency in the southernmost county in Sweden and its traveling card solution, Skånetrafiken and the Jojo Card will be respectively used as a case study to understand how this paradox happens on a concrete level. By discussing small objects, such as the Jojo Card, conceptual discourses can be unwrapped by looking onto the object and how other actors interact with it.

Four questions have been formulated that serve to achieve the main objective that has been set: 1.) What is the process of creation of rules and platforms of Skånetrafiken?; 2.) How do people become outsiders in the use and the non-use of systems and platforms?; 3.) What is the relationship between systems, platforms, rules and people?, and; 4.) Why can some people conform to rules while some could not? How do those who can not conform react to the system?

By conducting qualitative research through ethnographic methods such as in-depth interviews and go-alongs, four themes were discussed in answering the research questions. These are discussed in the sections a.) On the Creation of the Platform; b.) The Outsiders; c.) Accessing the System, and; d.) Degrees of adoption.

The findings of this study is not just applicable to Skånetrafiken understand the implications of creating platforms, but for other technologies and other types of problems that arise in society. This calls for a rethinking of how rules, platforms and systems are designed to be able to cater to different groups of people that would want to interact with it.

Keywords: Outsiders; Systems; Platforms; Adoption Process; Transportation; Mobility; Technology; Integration; Governance; Inequality.

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## Introduction

What can we learn from small everyday things? This study attempts to unwrap various societal discourses by examining how people interact with transportation agencies and items as “banal” as a traveling card. By examining this, I will explain how small things can represent theoretical concepts such as systems and platforms.

Systems are ever present in our society and have been here since the formation of civilizations. They provide a sense of order to be able to control how people act or even provide benefits to people. An example of a system is the concept of language wherein there are several rules for people to follow, the presence of these rules (e.g. subject-verb agreement, word order, etc.), is what makes people understand each other clearly and would help in preserving the language. One definition of *System*, according to Oxford Dictionaries, pertains to “a set of principles or procedures according to which something is done; an organized scheme or method” (Oxford Dictionaries, 2015b). By the formation of standards and rules, systems provide a mechanism that everyone learns to have order of things.

In relation to this, as with all systems, there is always a requirement for entry. Like any other relationship one has, whether be it with another person, a company, or society as a whole, there would be a price of admission where some aspects must be given up, or invested more to be able to make the relationship between two entities to work (Savage, 2011). When talking about societies and civilizations, the example of taxes is a form of the price of admission in this system.

But before being able to pay that price of admission, the act of admission must take place first. For some systems, there are several points of entry. These access points come in different forms in which people choose from based on their personal situation and at the same time their personal preference. Within the frame of this research, platforms serve as entry points within the System for the people to access it.

Platforms, according to Oxford Dictionaries is defined as “a raised level surface on which people or things can stand” (Oxford Dictionaries, 2015a). A platform can be placed for individuals to stand on, allowing individuals to stand on equal ground. The platform provides an opportunity to talk or interact with one another or with the one who put up the platform. This gives way into another meaning of the word platform, that is, “a standard for the hardware of a

computer system, which determines what kinds of software it can run”. With these two definitions, platforms could be physical or non-physical planes where it provides an avenue for normalcy through a set of standards and regulation for the system to function.

Putting these concepts of systems and platforms into perspective, my journey of coming to Sweden for my two-year Master’s programme in Applied Cultural Analysis (MACA) was an interaction with a new system. As with any new country that one migrates to, one is faced with a new list of requirements needing to be met in order to be “settled-in”, become part of that system, and linking back to that price of admission in systems and relationships (Savage). The greatest key towards settling in Sweden is the Social Security Number or personnummer (in English, translates to “personal number”), which is given out to citizens upon birth. For new arrivals, however, to be able to get that coveted 10-digit number is to secure their residence permit. After securing a personal number and residence permit, this allows one to avail of various services and set-up accounts, such a Swedish bank account, that you may need during your stay and throughout life in Sweden.

I realize that systems and the accompanying requirements could bring benefit to its members, as there is an interest in serving the particular needs of a collective of people. As with the price of admission, time and effort and even your identity is given up or invested in to be able to be considered as part of the system.

The concept of insurance is another example to be able to discuss in relation to systems. Insurance companies would require policy-holders to contribute an amount of money at a certain time interval. The differences in how one transacts with the system of insurance is dependent on the type of platform or kind of insurance one sees fit at that point one decides to become part of the insurance system. The pooled money will then be used by the company to invest in other businesses for the capital to grow, but also leaving a reserve when members need to avail of remuneration during times of need. Systems bring efficiency and benefits to the company itself and to the members that take part in it.

Many come to Sweden, myself included, to improve our lives, whether it be getting education and going back home after graduation, or to continue to stay here in Sweden. These are some of the benefits of becoming a member of the “Swedish System”. However, it must be noted that benefits are not just one directional, that it is not only the members (or the would-be members) receiving benefits. The system also benefits from the creation of new members such as

the acceptance of immigrants in Sweden to fill in job vacancies, in the middle of the 1900s (Wallengren, 2014).

As with the case of Sweden, being a part of the European Union, some who come from another EU member country would have some steps extradited given their right to free movement ("Right of Union citizens and their family members to move and reside freely within the territory of the Member States," 2004).

However, there are some instances where an individual does not have enough tools or the "birth right" to be admitted into a specific system. Linking back, there would be individuals who are rejected because they have not met the necessary requirements to receive a personal number, or to be enrolled for an insurance policy. There would be those in societies today who want to avail of the services and benefits of a system, yet could not be part of one. This is where the focus of this thesis lies – on the non-members of a system: the periphery.

## Grounding the concept

I would like to problematize the how systems include and exclude people. In relation to systems and platforms, I would like to ground these concepts and use the Skånetrafiken system and the Jojo Card platform as a case study for this thesis.

Skånetrafiken is the public transportation agency (kollektivtrafik in Swedish) in Southern Sweden, wherein the Jojo Cards is used as a method of payment. The Jojo Card provides cashless transactions when purchasing tickets for the trains or riding on to buses provided by the system. Cards can be loaded with credit in the ticketing machines or online. Whatever perceived convenience Jojo Cards may give to passengers, there would be cases wherein passengers would use the services of the system while not having these Jojo Cards (i.e. via the mobile application or paper tickets).

But why ground this study on Skånetrafiken? In order to address this, the question first must be, why is the issue of mobility important? Mobility or the ability to move from one place to another is important for our own development and is essential for societies to thrive. The United Nations' Universal Declaration of Human Rights recognizes the freedom of movement of all humans whether be in within countries or between countries (1948, § 13). During his talk at the United Nations Headquarters in New York City, Enrique Peñalosa, the head of the *Institute for Transportation and Development Policy*, talked about transportation infrastructures, such as sidewalks as important elements of a democratic culture (Institute for Transportation and

Development Policy, 2013). As Skånetrafiken and its services are considered to be public goods or commodities, it is important for the organisation to be able to assist people in exercising their own right to movement and in the process, upholding democracy through their services.

Now that I have addressed the issue of mobility, grounding the study on the Skånetrafiken system and the Jojo Card platform is relevant when looking into Swedish society or systems in general. Future researches can extract the conceptual ideas of the thesis and apply the same methods and framework when dealing with other kinds of systemic problems that society is currently facing.

Though this study grounds itself to the Jojo Card platform and Skånetrafiken, I highlight the themes and discourses that revolve around people's adoption and non-adoption to such platforms and systems in this context and on a conceptual level. A Jojo Card, however "small, seemingly trivial and valueless object" (Löfgren, 2012, p. 170), by looking into scaled down objects could "produce different and sometimes surprising insights" (p. 180) - for Skånetrafiken and its passengers, and for the greater society.

Diving into the field and concepts further, Skånetrafiken is a state-owned transportation company/administration that services the Skåne area in Sweden (Region Skåne, 2014). There are several options of obtaining a ticket: credit card payment on intercity/regional buses; on the Skånetrafiken mobile application; at their customer service desks; via Short Messaging Service (SMS), and; via cash or card payments through the ticketing machines in main stations and stops.

There are many alternatives in loading credit onto the Jojo Card: through cash or card loading in the ticketing machines, at their customer service desks; via the website, and; through several retailers such as Pressbyrån, ICA, etc. (Skånetrafiken, 2014b, p. 74). A minimum amount of 200 SEK (Swedish Kronor) is required when loading a card.

Given all the payment methods available to passengers, it seems that the organisation provides easy and accessible services for all passengers. It must be noted, however, that there seems to be a preferred method of payment and hierarchy of payment modes given the variety of pricing and convenience that it brings.

While payments via SMS, mobile application, and the Jojo card are accepted, there is no other way for you to hop on a bus legally. You can buy a paper ticket when you are originating from stations where the ticketing machines are installed. If your trip originates somewhere else, other than in station with ticketing machines, then you have no choice but to walk or have the

prepaid tickets (*förköpsbiljett* in Swedish) beforehand. The advantage of Jojo cards is that one can take the bus from a distance far from ticketing machines since bus drivers do not accept cash payments.

Another benefit of the card platform is that the user can also receive a 20-percent discount off the regular fare when purchasing the travel ticket (Skånetrafiken, 2014a). One can also use their Jojo Card to carry a monthly pass within one zone or several zones, among other types of passes (student, child, pensioner, etc.). In 2013, the agency has also released a variant of the card called Jojo mini that enables people to load smaller denominations, as low as 50 SEK, for those who seldom travel, but it does not provide passengers with the same discount as with the standard Jojo card option (Skånetrafiken, 2014b, p. 74). This information shows that by using the regular Jojo Card, one is getting more money's worth as they pay less than the other methods. This means though that one must be able to pay a set minimum amount (200 SEK) which is about 809% of the regular fare (22 SEK) for one to be able to get the benefits of the card (getting 20% off the regular fare).

Translated from Swedish, some of the objectives from the Agency's business plan for 2014 – 2017 (Skånetrafiken, 2014b, p. 6) are: a.) Recruit new members, take market share, and instil loyalty among the existing customers; b.) Give good customer service, regardless of the situation, and; c.) Develop appropriate payment solutions to simplify it for the customers.

With these objectives of Skånetrafiken in mind, the system has its aims to achieve inclusion and accessibility to the system. They also aim to adjust the pricing and access platforms to be able to cater to those who would want to access the system.

## Objectives

The aim of this study is to understand how systems that intend to be open encounter the paradox of excluding people in the process. By using Skånetrafiken and its Jojo Card platform as a case study, I will be able to understand how this paradox happens on a concrete level. With this in mind, four questions have been formulated that serve to achieve the main objective that has been set:

1. What is the process of creation of rules and platforms of Skånetrafiken?
2. How do people become outsiders in the use and the non-use of systems and platforms?

3. What is the relationship between systems, platforms, rules and people?
4. Why can some people conform to rules while some could not? How do those who can not conform react to the system?

The answers to these questions will have empirical and conceptual implications that would address the main objective of this study. By understanding the reasons and the experiences of the outsiders, this could be a start on finding ways to overcome barriers to admission. On the conceptual implication, using the empirical material as a foundation, I aim to create a theoretical framework on systems and platforms and how they exclude or include people. These questions and the answers I will uncover in the following pages are essential to understand the experiences of the outsiders, and by helping those that would need the benefits of membership the most.

## Methods

To carry out the research through which this thesis is based, I made use of several methods as a means to gather empirical data. The methods that I utilised for this study had to highlight the experiences of outsiders when using or not using the platform and even the system in question. But before being able to get the data, the sourcing of material – specifically the respondents was the main priority.

During the early stages of this study, netnography was used to be able to understand and get a grasp of the trends and general sense of a target population, and in this case, the users' perceptions and experiences with Skånetrafiken and the Jojo Card (Hookway, 2008, p. 95; Rokka, 2010, p. 385). These message boards were selected based upon my familiarity with them and the knowledge that these sites have the potential to provide relevant data. I browsed through different messaging boards such as Reddit and Flashback. In addition to this, these two boards have a heavy Swedish "population" with Reddit having various subsections dedicated to Sweden (different localities, language exchange, etc.), and Flashback having most categories posted by Swedes. These posts are considered to be in the public, and permission to read or share posts on many of the message boards is not required.

On the other side of the coin lies the system, Skånetrafiken. Online clippings (i.e. news articles, government documents, and reports) helped me to be able to get a clearer view of the context on the mechanisms of Skånetrafiken, its network and all the other issues linked to the

Jojo Cards. The usage of clippings as empirical data in this research has helped me in showing the trends that are happening in the region by setting up the field and showing the intricacies of the subject at hand. By using clippings relating to transportation in the Skåne region and Jojo Cards, I am able to translate these into data and bring forth the general trends and perceptions on such issues. In total, there were seventeen clippings that were gathered.

By making use of netnography by browsing through messaging boards and through the online clippings, helped me form the research during its early stages. This has helped as it gave me an idea on how to frame the thesis and also as empirical data which can be read in the succeeding pages of this study. This gave me a better understanding regarding the experience people have using the system, what their thoughts are about the policies in place, and juxtaposing it with the policies and trends set forth by the system. By doing so, this provided a guide and framework for my research and through the recruiting phase of this research.

In regards to the selection of informants, I made an active decision to automatically disregard those who have not been using the services of Skånetrafiken for more than a year. A professor at Lund University whom I was having a casual conversation with said that he never uses Skånetrafiken, as he has a car to drive around Skåne and to his hometown just east of Skåne. He does, however, use Stockholm's public transportation services when he is there. So was the case of Irina who last used the bus three years ago. Irina stopped using Skånetrafiken as she became physically uncomfortable with the motions of the bus. She also felt that the use of Skånetrafiken was incompatible with her current lifestyle and her work as an on-call cleaning lady – hence seeing the benefits of using a car to be the only viable option for her. These cases depict that the individual's non-use of a system is hinged upon their regular use of another system, but also based on their lifestyles. I am excluding the population who exclusively uses one system such as cars. I believe that their responses would hinder me in targeting the objectives of the study. If it were a study on the behaviours and reasons of car drivers not using Skånetrafiken, then their possible responses would be relevant and meaningful. However, the focus of this study is to see how non-users of Jojo Cards interact with Skånetrafiken, which meant I had to be where these people are: in the buses, in the trains and in the stations.

As I foresaw that I would be traveling regularly during the course of the fieldwork (from January to April of 2015), I thought of procuring a monthly student pass between the zones of Lund and Malmö to be more economical when doing this portion of the study. By becoming

mobile, it provided me with opportunities to look for possible informants and conduct observations when not interviewing. This entailed that I stay situated primarily in the central stations of Lund and Malmö, and also ride the buses and trains within and between Lund and Malmö to be able to source respondents. Unfortunately, I was not able to source informants through this means as prospective informants did not want to be bothered during travel. Some were hesitant in starting the interviews, and some did not have the time to do the interview. To reflect, it may have been due to my personal hesitation in approaching people and striking up a conversation as a lead-up to an interview.

Though unsuccessful with sourcing informants through this method, I was able to successfully draw observations from this. Having spent a significant amount of time around the station near the ticketing machines, in the customer service area, on both regional and city buses in Lund and Malmö City, I was able to interact with the system. It enabled me to create observations through the use of auto-ethnography, while at the same time drawing my past experiences when interacting with the system. Observations played an important role in the research of this thesis when it came to focusing on how both insiders and outsiders interacted with Skånetrafiken. Specifically, I observed how travellers, both outsiders and insiders interact with the ticketing machines, the card readers in the buses, with fellow travellers and even with the kollektivtrafik personnel as well.

As a response to the experience I have had with the previous strategy, I thought about utilising my personal contacts and see if they: 1.) had used Skånetrafiken recently; and 2.) have used the system without a Jojo Card. Should both conditions be met, interviews were conducted. In talking to my own contacts, I found that majority of my contacts living in the region do not qualify, as most have their own Jojo Cards. However, pursuing the contacts had helped me in gaining referrals to potential informants. In addition to the snowball effect from the my contacts, I also posted some entries myself, one each in both Reddit and Flashback in March of 2015 in hopes of getting feedback and respondents for the following method. I was able to get one respondent to agree on an interview and a go-along.

In total, there were eight informants interviewed and observed. The informants are composed of those who are just visiting and who are living in the Skåne region. Of the eight, there were three informants who were just visiting the region and remainder have been living in the region during the time of the interviews. Of those informants, some allowed to conduct a go-

along in order for me to be able to understand how they interact with the system. This was valuable as this was the data where there is interaction between myself and the respondent and that would enable me to understand the experiences even further given the setting of the fieldwork (Kusenbach, 2003, p. 462). These experiences draw up phenomenological insights as to how the informants react to the limitations and regulations of certain points of entry and how it affects their interaction with the system.

During my interviews, there was one person who requested their identity to be made anonymous. With this in mind, I thought about making the identities of all of my respondents as anonymous as possible, for the sake of uniformity.

Similar to the first section on the material that is readily available, two informants from the side of the system were also invited for interviews to be able to understand the rationale and intentions behind the policies and decisions taking place. Martin Güll, the Business Development Head of Skånetrafiken and Johnny Albenius, the Chief Executive Officer of Resekortet (a state-owned company, and will be discussed in the succeeding pages of this paper) were interviewed. Given their time limitations and their geographic locations, specifically of Resekortet, which is based in Stockholm, I had to conduct these interviews over the telephone. Before conducting the actual interviews, I sent both of them prepared questions regarding their agencies and their departments and on the platform that is in question. When I did the calls, we went through the each of the questions and provided time to answer each of them. If their answers were insufficient or in need of more questioning, I proceeded with follow up questions until I saw the final answers sufficient enough to proceed. At the end of my interview with Martin Güll, there were some discussions on conducting more fieldwork with the people working in Skånetrafiken, however given the lack of time and also the speed of coordination with the other members of the agency, this was not a possibility. For the two informants from the side of the system, I retained their identities as they are speaking in their professional capacity as official representatives of their respective organisations. Their insights and explanations can be supported by other members of their organisation and even other sources.

The material drawn from the methods from the secondary sources such as netnography, news articles and documents; and also the primary sources through observations, interviews and go-along helped me form a substantial portion of my thesis: the data. The data in which I will be addressing in the subsequent chapter has helped me better understand the context and the

intricacies of the field and the system, provides insight in the shared experiences of the outsiders in relation to their interaction with Skånetrafiken when not using the Jojo Cards.

## Theories and Previous Studies

In this thesis, I will be using an ontological perspective in framing the empirical data that I have gathered. In this perspective, I am specifically using the constructivist lense where I discuss how things came into being and present the data and frame it as to how the system and platform took shape. With this, experiences of users of the system came into existence with creation of platforms, regulations and limitations and the prices of admission onto the use of platforms and systems. With this, I then extract epistemological insights from the analysed empirical data where I make sense of the data, and be able to extract the knowledge by conceptualising the findings.

### Actor Network Theory

In the constructivist approach such as the Actor Network Theory (ANT) sees that phenomena, objects and programmes are deconstructed on how a series of actions and reactions necessitate the final outcome of the subject. The French sociologist, Bruno Latour was one of the proponents of this theory when he was researching in the field of Science and Technology Studies. Whenever we make an action or a decision, we go through a thought process and we derive to an end based on the influences and barriers that we have, whether it be interpersonal or something that is external from ourselves. As people are influenced by different actors, such as people, Latour argues that through this theory, non-human actors such as objects are also capable in becoming part of this network. By extending this, Latour is also saying such objects are also capable in initiating the series themselves (Latour, 2005). As with creation of objects such as medicines, in which Latour argues was not due to science for the sake of science – there are several events and actors that influenced the creation of these objects (Latour, 2005, pp. 98-103). Even inventors of medicines are considered as actors themselves as what Latour is arguing about when discussing the creation of objects.

In relation to this study, Skånetrafiken is one of the actors within this network. It is a state-owned company, its actions and decisions have been arbitrated by a governing body, but is in fact a sum of the different actions and reactions of the governing body with the different actors within the network. One of the objects that were produced in this series is the Jojo Card.

## Periphery

With material manifestations of the ANT such as the Jojo Card, experiences when transacting with the system using the platform will never be the same to everyone. With this in mind, this creates a division or different categorization of what people are in terms of reacting towards the system and the platform at hand. American Sociologist Howard Becker in his book *Outsiders* opens his discussion on the branding of outsiders, on their inability comply with the rules of a social group (1997). In his book, he examines how people are categorized as outsiders, but at the same time even the so-called outsiders would be looking at the opposite group as the outsiders. Becker argues that an examination of the experiences of those that are branded as outsiders of society is necessary for people to fully understand the experiences and the difficulties that they have in being a part of society, or in the same breath why some would choose to become outsiders.

With the introduction of systems and platforms, material culture helps in signifying those that are part of the main group and those who are not. A Jojo card can hold meaning of identity in which other people can identify with. As membership in systems or the use of particular platforms could bring benefit to users, those are not part of the main group could become more disadvantaged as they are in the first place as what Beckers was pointing out when looking at the social location of the deviants of his study.

What is important to reflect on is Becker's notion of outsiders. Though he aims to understand the outsiders by looking at the process of how they became outsiders, or why they became as such, I argue that these outsiders do not exist in a vacuum, and I see problems in how he uses the term outsiders in his book. As I see it, this group is located on the edges of society, on the peripheries of the society which is far from the reaches of those that are in power, who are in fact catering to the main group. These people in the peripheries do share the space with Becker's insiders, thus this necessitates that there are degrees of closeness to the centre and must not be seen as a mere binary of insider and outsider. Even though Becker's ideas in his book still stand, this is where I re-appropriate his thoughts and turn it to something new.

Another issue that I and anyone reading this study should be conscious of when referencing Becker is that he was writing at a time, in the 1960s, where it was just easy for people to brand and use labels to categorize a group of people who seem to not conform with society (Cullen, 1984, p. 128). The 1960s proved to be an eventful decade where the counter-

culture movement was increasing in popularity, where they actively veered away from the mainstream or the government that was engaging in the war in vietnam at that time. This was also the time when the country was experiencing an economic recession, displacing people with the lack of employment, in addition to the waves of activities with the African American people seeking equal civil rights with their white country folk. With the influx of social issues of this time, focus was on seeking out the other-ness of things, as what Becker's contemporaries such as Erving Goffman (1963), when he was writing *Behaviour in Public Spaces* where he talks about the presence of rules and expectations that are set for people to conform and Mary Douglas (1966), when discussing about *Purity and Danger* in relation to what is considered as taboo or unclean and not.

With the these events that shaped their viewpoints, it was hard to problematize the need to come up with these labels as what Francis Cullen (1984) did when he was problematizing these categories that were set by the earlier theorists. The mindset has changed in terms of labelling as the thinking now looks at the presence of nuances that are present in each individual regardless if they are classified into a category. As with my particular study, even though I will make some categorizations with the informants that I have interviewed, I see that there are nuances that are present in each of them and that their experiences are unique. At the same time, grouping them together is helpful in terms of looking for common qualities and experiences that can be analysed.

## Related Studies

There are a lot of studies on the behaviour of commuters and mapping out the commuters habits when pertaining to mobility and the use of travel cards such as (Jánošíková, Slavík, & Koháni, 2014); Nishiuchi, King, and Todoroki (2013); Tao, Rohde, and Corcoran (2014); Trépanier (2012); Yoonmo, Misuk, and Youngsang (2013). However, what I am researching about cannot be measured in a quantitative way. What I wanted to extract are qualitative results, something that is hard to be captured by any quantitative *measuring stick*. When British Sociologist John Urry founded the Journal *Mobilities* in 2005 along with Kevin Hannam and Mimi Sheller, they worked hard to push the thinking of the importance of other forms of discipline in shaping mobility studies (Sheller, 2013). This was evident in the deluge of articles that are qualitative in nature in the journal's first edition that was released in 2006. However, that

movement did not stop, according to Mimi Sheller, “Mobilities theory departs from classic social theory in part because it builds on a wider range of philosophical perspectives to more radically re-think the relation between bodies, movement and space” (p. 49). This is where my study enters the field, something that contributes not only in the philosophical perspectives, but on issues that touch on how passengers interact with technologies, with spaces and with each other.

Orvar Löfgren (2008) discussed in his journal article, *Motion and Emotion: Learning to be a Railway Traveller* on the interplay between material infrastructures of travel and emotional mindscapes during the 19<sup>th</sup> and the 20<sup>th</sup> century in the Öresund Region. By using a historical perspective, he was able to see how infrastructure and the availability of services affect how people interact with the system. Such as the presence of working class service personnel encouraged certain the early upper-class passengers to bring different types of luggage such as a hat box, where in contrast, someone who cannot afford for such services would just bring one bag with them during the trip. In his study, issues of class and segregation have been highlighted through the different materialities in the train ride. Though he discussed material culture can affect people’s behavior, attitudes and context have widely changed between now and the timeframes that Löfgren has discussed. The Scandinavian Countries have moved from a class-based to a more egalitarian society, where class differences are not that apparent as it was before.

As society becomes more equal in terms of class, there are still degrees in how one can adopt to different systems. For Löfgren, he says that one’s mindset or mode (being a traveler, or being a seasoned commuter) affects one’s attitude in traveling. For Arp Fallov, Jørgensen, and Knudsen (2013) when they studied the passengers in Aalborg in Denmark, they discussed how constant interaction with the system would increase the knowledge of the users in performing and transacting with the system, but also improve their state of belonging in that system. As they have been harping on the different studies that had the same findings of place attachment and belongingness (Lewicka, 2011; Park, Burgess, & Janowitz, 2012), they do not bring something new to the discussion on how to best serve those that are in these spaces for a limited amount of time. Also, they do not look into the differences in terms of the rules and people’s ability to conform to it.

By looking on to the different needs of other groups in society, Meneses-Reyes (2013) looked into the infrastructures and rules for cyclists in Mexico City. She found out that regulation and the enforcement of cycling rules is a product of the different actions and reactions

of different actors in the network. The study suggests it is not enough for governments to provide options and infrastructures to cyclists, what is needed to protect these groups is to bring equal focus to this group as what the government is doing to the car drivers. This is somewhat similar with my study as there are options available for different types of people, but there is always the main type to transact with Skånetrafiken, which causes problems in enforcement and in the entire experience of those that do not transact with the system with the main platform.

My study is also in line with studies of Human-Computer Interaction (HCI) and how it relates to mobility studies. In a conference paper to the *2015 ACM SIGCHI Conference on Human Factors in Computing Systems*, a study was conducted on the Oyster Card, a contactless travel card used in buses and trains in London where changes in transaction methods from cash to the Oyster Card has sparked fear among drivers and passengers alike during when the new platform was introduced (Pritchard, Vines, & Olivier, 2015). Also, the same study contributed in the sense that technologies and systems highlight the otherness of vulnerable groups through the lack of awareness or of infrastructure.

Another conference paper, this time to the *10th international conference on Ubiquitous computing* touches on HCI and mobility but focusing on the design of processes and in crafting of the public policy relating to different items such as passports and travel cards in which one could connect a chip for easy retrieval of data for a wide array of functions (Poole, Le Dantec, Eagan, & Edwards, 2008). The study shows how public policy affects the end-users and that there are functional and non-functional aspects that are included in making items “smart” with the inclusion of readable chips in them. As with the previous study, it has also shown that those who are not from the locality are disadvantaged as when talking about traveling cards, they would be paying double the amount as what passengers of London’s Oyster card would be getting. Another finding in the study also touched upon how using such items gives the users a shared identity. In relation to this, a blog entry by *Teenthropologist* suggests that upon his transition from being a student card user (that provides for free rides in the system) to a regular Oyster Card user, has helped him transition and become a part of the shared identity of the workers, of the main group that commutes in the London Tube (Teenthropologist, 2012).

Although these studies touch upon the issues of adoption, of the division between the main passengers and the outsiders, and of technologies causing such feelings, I argue that such studies were not comprehensive enough in giving a better perspective on the construction of

rules and policies that necessitated such experiences of otherness. Also, my study though related to the previous studies on the bases of Mobility and HCI, I see these bases as just parts of the bigger picture. Though my study would be touching on the same issues of these studies mentioned earlier as my context is on the Jojo Card platform and Skånetrafiken, I am elaborating more on the processes involved, on the experiences of the others, and with these, I examine and question these issues by levelling these findings on a conceptual level to discuss on the overarching problems that are experienced in society today.

## Data and Analysis

Based on the collected material during the fieldwork phase, and as discussed in the methods section, I was able to group and categorize the collected data into four theoretical themes. The themes are: the actions and reactions within the actor network theory; on the periphery; the metaphor, and; the varying degrees of adoption.

These themes will be discussed in the succeeding pages of this study, within the different subsections of the Data and Analysis namely: On the Creation of the Platform; The Outsiders; Accessing the System; and Degrees of Adoption and Prioritization.

The first subsection, “On the Creation of the Platform” makes use of Bruno Latour’s Actor Network Theory in discussing the series of events from the different actor groups within the network that lead to the creation of the Jojo Card and the regulations and limitations that come with it. With the materiality that is the Jojo Card Platform, it creates a sense of hardship from the user side as it creates a change in the status quo on how people should interact or transact with the system. This subsection makes use of the secondary material sourced from news articles and different government documents and reports.

As a change in materiality can both include and exclude people, the subsection “The Outsiders”, discusses how the regulations and limitations deter some people from using the system and also override the system. This is divided into two parts: Visiting Tourists, and; Secret Deviants. The first part narrates the experiences of those who are just visiting the region and their interaction with the system. This shows how the card, meant to help ease transportation, held so much weight in their decision to not use the platform and even to the extent of skipping the use of the system altogether. The second part, details how one well-meaning informant accessed the system without even formally transacting with it given the limitations of the main platform, which is the Jojo Card. This part also made use of my observations during the fieldwork in Malmö on other deviants who accessed the system without transacting or paying for the correct fare that is prescribed by the system. This part shows how knowledge and over-performance of their membership in the system helped them take advantage of the system.

The third subsection, “Accessing the System”, leads to the creation of metaphor that brings forth a better understanding of how platforms, regulations and systems play a part in how users access systems to be able to reach an end or goal. It also discusses the presence of different platforms help in accessing systems, and also of different systems in reaching the end / goal

should there be problems with their main mode of accession. This then leads to the discussion of how platforms and systems can act as revolving doors that would either exclude or include everyone depending on the circumstances. This subsection takes a theoretical turn in which it makes use of the realizations sourced from the fieldwork but in the end I conceptualized these findings to something that can be used in different instances, not just exclusively for Skånetrafiken.

The last subsection, called “Degrees of Adoption and Prioritization”, discusses how the ease of adoption towards technology, regulations and irregularities varies from person to person, and is greatly dependent on how deeply embedded and individual is in society. This includes the discussion of the “Matthew Effect” wherein those who are already advantaged get to benefit, but also making it hard for people who need the benefits more to be able to access these benefits, such as the case of one informant who is in the vulnerable position of easily being categorised as an outsider in the eyes of the system.

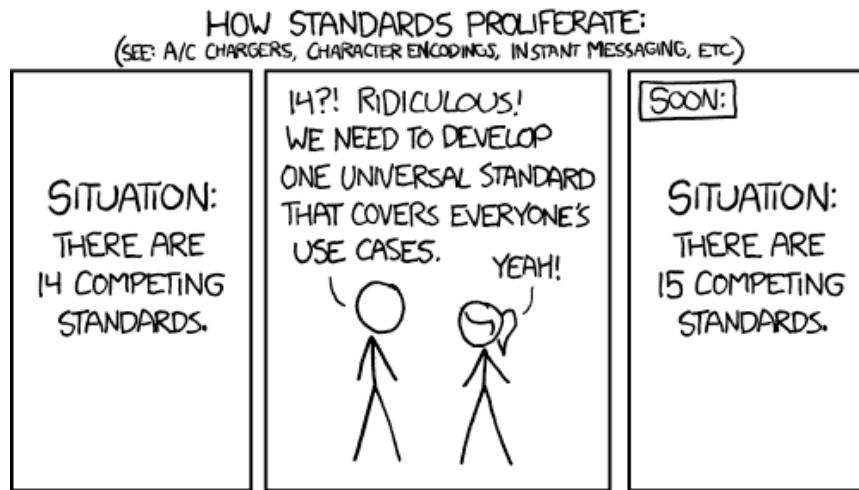
Within each subsection, analyses are also intertwined with the narration of data in each subsection. With these data and analyses, these become my springboard which leads to the Discussion section where I elevate the findings further by making parallels with other issues that have happened or are still happening in our society.

## On the Creation of the Platform

In his discussion on the series of actions and reactions, Latour focuses on the actors involved in this series. He has two categorizations for this: the *Intermediary* and the *Mediators* (Latour, 2005, pp. 38-42). He defines intermediaries as: “what transports meaning or force without transformation: defining its inputs is enough to define its outputs” (p. 39). And this is where we start, with the intermediary. Basing from my interview with Mr. Johnny Albenius, the Chief Executive Officer of Resekortet AB, there was a directive from the Swedish Government to have just one universal ticket that is interoperable between all of the country’s public transportation agencies (Resekortet, 2009; Statens Offentliga Utredningar, 2009, pp. 330-331). It was envisioned that the form of a smart card would become the universal ticket for the agencies such as Skånetrafiken. For Skånetrafiken, this made the form of the Jojo Card that we have right now. According to the Albenius, Resekortet is a state-owned company but is 40% owned by the Danish Government. What it does as a company is that it owns the specification or the grooves of the key – the security features to deter fraudulent activities in transacting with the system.

According to Latour, mediators transform, translate, distort, and modify the meaning or the elements they are supposed to carry (2005, p. 39). With the intermediary passing the specifications down to the different public transportation agencies, interpretation and implementation become a problem in terms of having that vision of having a “common payment solution” by the Resekortet and the Swedish Government. In a news article by Simon Matthijs (2012) in the Swedish Transportation Industry periodical, *Infrastruktur Nyheter*, he argues that there seems to be a political impossibility for travel cards to become fully interoperable between counties as each county has their own sets of priorities (free transportation to senior citizens in Gothenburg and not in Stockholm) or different pricing schemes within these counties that have their own public transportation agencies.

As with any introduction of a “universal” solution for platforms, and with transactions with public transportation, there is this problem of adding problems to the “already messy” situation. The idea of an interoperable platform fell short as problems happened with the interpretation and implementation of the different public transportation agencies with regard to the having a universal solution between the different public transportation agencies. Given that the different actors have their own influencers and priorities, there would be several iterations of that particular standard that was set out by Resekortet. Bruno Latour discusses that in actor-networks, the actor itself is “not the source of an action but the moving target of a vast array of entities swarming toward it”, though the action is created by these actors. This suggests that their actions have been formed as such given the “hidden variables” (and possibly from other actors as well) that tried to influence their decision and actions (2005, pp. 46-50). As Mediators, they are not just shaped by one intermediary, but there are different intermediaries the public transportation agency of each county has to take in. With the different prioritisation and influences that formed their decision, that dream of having a universal, interoperable solution became a “political impossibility” as Matthijs calls it.



**Figure 1 How Standards Proliferate (Munroe, 2015)**

With the comic strip above, not only did the attempted universal solution fail, it brought complications as there are now multiple iterations, and multiple platforms in the space now due to how the different players in the network acted in the end. In addition, not only is the comic strip applicable on the different public transportation agencies, but this is also applicable on the idea of a platform that is meant to solve on eradicating the different means on accessing the systems. The best example of this is this letter sent to Skånetrafiken and published on Kristianstads Dagbladet (Bergquist, 2011). The undisclosed writer had reported Skånetrafiken's cashless policy to the police, sometime after the introduction of the Jojo Card platform. The individual expressed the opinion that the policy is illegal as it stops recognizing the legal tender, the Swedish Krona as a means to be able to transact with the system. The letter was sent to Kristianstads Dagbladet in the hopes to reach Skånetrafiken. In the letter, it states "I have no mobile phone, debit card or even a credit card", and continues to prefer to pay with cash while accessing the services of Skånetrafiken.

Given that the new platform of travel cards was introduced to eradicate the other platforms, the presence of people such as the individual who wrote the letter, makes it harder for organisations to minimise the number of platforms. But we also have to ask, what is the essence of creating a newer platform? In my interview with Skånetrafikens Martin Güll, Head of Business Development, he said that:

[The Jojo card platform is a] cost efficient means of having large volume of travellers every day pass through our system, with as short a delay as possible per traveller. We don't accept cash any longer on-board our vehicles, due to union restriction. The cards provide us with a means of quickly validating the traveller (against fraud) and at the same time get business statistics of travelling both for our own planning as well as revenue sharing with the companies that carry out the production of traffic, both of which are difficult with paper tickets (Güll, 2015).

In his response, there are two main reasons on introducing a new platform: 1.) Improvement and efficiency in operations, and; 2.) As a response to the other actors in the network. On the first point, verifying the tickets one by one and manually would take time in the operation of the each unit within Skånetrafiken. As time is essential in their line of business, increasing efficiency must take precedence in their decisions. Turn over must be increased in terms of verifying one passenger after the other to continue with a buses onward journey, or for the conductors in trains to verify as much passengers as possible while in transit.

By gaining knowledge on the usage of passengers, the system has become more intelligent and would have made changes on their operations based from the intelligence and data that have been gathered through the new platform. This makes it efficient in providing the frequency and volume of traffic at a certain point and time, and also on how Skånetrafiken distributes the money to its contractors. The second point shows that there are different actors that necessitated the introduction of a new platform in Skånetrafiken. There is this government idea that all the public transportation agencies should have one common ticketing solution, through the supervision of Resekortet. Another is the presence and development of the technology brought about Resekortet. The Drivers' union also necessitated the change in policies as it has become dangerous for drivers to have the money in their possession on the job (Myhrén, 2006; Sveriges Radio Kalmar, 2008; TT, 2006).

As I have discussed on the side of the system, I now move on to the side of the users. With the introduction of the new platform, this has threatened to break that habit or that public custom that has been ingrained with the users in how they interact with the system (Frykman & Löfgren, 1996). After the introduction of Jojo Cards in Autumn 2009 (Bringmark, 2013), it was

decided and announced by Skånetrafiken that by June 1, 2011 Skånetrafiken would stop accepting cash payments on its trains and buses (Sydsvenskan, 2011).

### **Andel nöjda kunder\* 2000–2013**

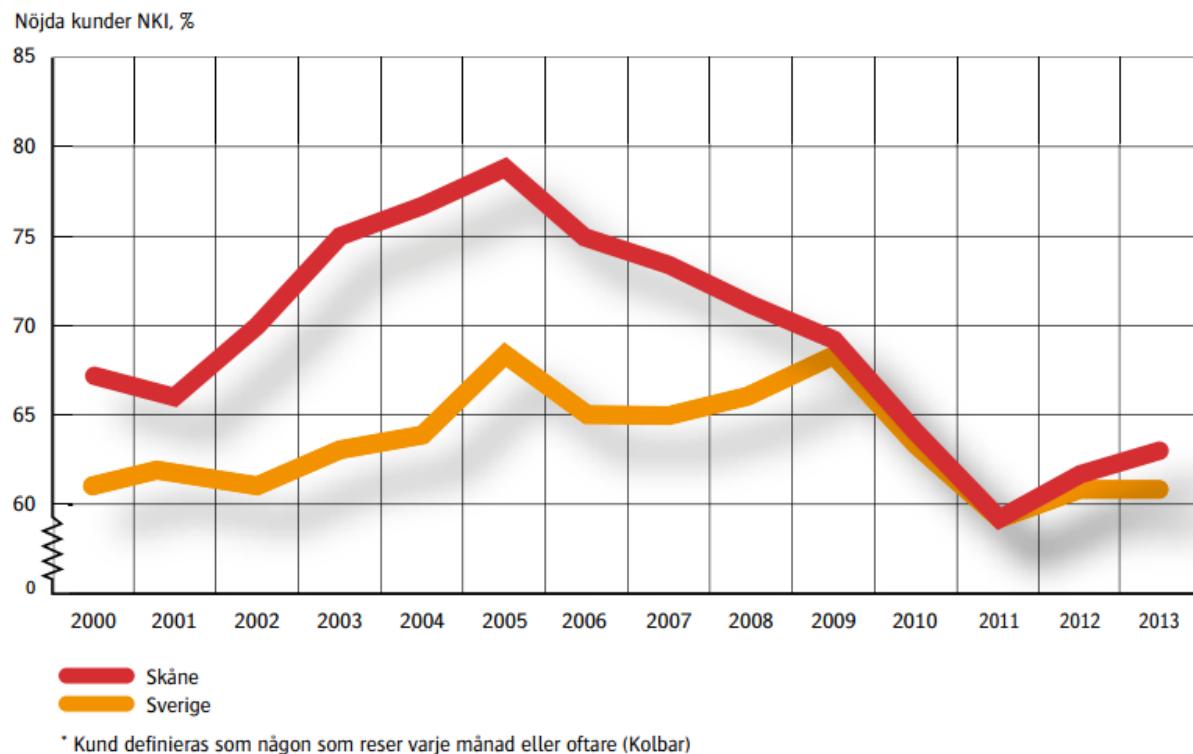


Figure 2: Percentage of Satisfied Customers (Skånetrafiken, 2014b, p. 18)

Aside from the issues of trip delays and quality of the trips, Skånetrafiken implied that issues of pricing and simplicity of transactions were the causes of the users' satisfaction (or non-satisfaction) toward the company (Skånetrafiken, 2012, p. 13). In 2011, it is not coincidental that Skånetrafiken had hit its lowest customer satisfaction rate, the same year it mandated to make all trips to be cash-free. This trend was also seen in the entire country in 2011 as the same concerns made up for how users rate their satisfaction towards the service brought by the different public transportation agencies in Sweden (Ipsos, 2013). What is interesting in this scenario is that the mediators, and in this case, the passengers are capable of expressing discontent with the intermediary.

As it is with cash payments as a norm and now being changed, Gunnar Alsmark (1996) writes: "The simple things we once did without thinking must now be adjusted, changed or abandoned. It is this process of cultural encounter, in which everyday routines are transformed

into ceremonial customs and habit is redefined as habit” (p. 88). Though he has written about the integration process of immigrants to Swedish customs and norms, we can see that these practices that we do not give much thought to is now being questioned and categorized as something bad. As this new standard of transaction becomes the norm, it raises different issues regarding outsidership of the system.

The very act of Skanetrafiken studying the satisfaction levels of the passengers turns the situation now in which the passengers now become intermediaries that transmit the output towards the mediators. By treating feedback as input where Skanetrafiken will translate into other actions for them to improve their services. By referring back to Figure 2, the percentage of satisfaction has increased again after 2011. In the next section, I will be discussing how there are other kinds of users that do not have the same experience in interacting with the system as opposed to the general population.

## The Outsiders

Systems are built as a means to bring forth a certain benefit to users, as discussed in previous sections of this study. As there are benefits, or achieving one's end in using these systems, there could be a limited supply of resources into it, such as space in a bus, or electricity to run the trains. For these systems to function, costs are needed for it to continue functioning: for the bus to keep on bus-ing, or for the train to keep on train-ing (Merleau-Ponty, 2002; Swartz, 1997; Vacher, 2013). Given that resources are finite, or would require sources, certain levels of control must be implemented to either: a.) limit the flow of people using the system, or; b.) have parameters in which reciprocation or trade in resources will take place in.

With operations in Skånetrafiken consuming resources and eventually necessitating costs, it would mean that systems would need reciprocation or trading of resources for it to function. This would also mean that closing the system is a necessary mean to be able to control the flow of users (Lash & Urry, 1993, p. 17) and with this control, systems would be able to ensure that the reciprocation would take place. In this case, Jojo Cards, or any other platform of transaction helps Skånetrafiken to control the flow of people to use its different transportation offerings. However, the creation of platforms has a tendency to create barriers, preventing people to access particular systems.

## Visiting Tourists

In an interview with Ida, a German tourist in the Öresund region to visit friends, she quickly answered, "but I'm not a resident, why would I have it!" when asked about her reason for not having the travel card when she travelled here. With her answer, she knew her place in Scanian society – which she is not part of it to begin with. This quote from her is powerful as the symbol itself, Jojo Card held so much meaning towards citizenship, or performance of citizenship of that system. For her, the Jojo Card was a cultural production of Benedict Anderson's notion of nationalism (2006, p. 141). According to Anderson, the creation and even the usage of such cultural products, and in this case, the Jojo Card, is a means to show that one belongs into society. Linking this to Beckers, self-segregation happens when one does not identify with the other group, in which , in which Ida does not share that identity with the Jojo Card users of Skånetrafiken.

For Ida, it did not make sense to get her own Jojo Card since her host had a Jojo Card to take both of them around when they were together. In her five days staying in Lund, she depended on her host as she saw that getting a card for herself was “very inconvenient”. On a Saturday night, she planned on going to Copenhagen to celebrate another friend’s birthday; it was also her last night in Lund. In fact, attending the birthday celebration was her main reason in traveling to the region. But as she did not have, and refused to have a Jojo Card, it felt as a huge disincentive for her to travel across the bridge to Copenhagen as her phone was almost out of power, which took out the option of relying on her phone as a platform to ride on the bus. And the host’s apartment was 22 minutes away to Lund Central Station by foot. This also meant that she had to carry her luggage.

There was a hesitation, of whether to go and pursue with that travel that night, or not. It was also her first time to be introduced to Melodifestivalen<sup>1</sup>, which made her stay longer at her host’s apartment. After the show and a full movie later, she decided that she needed to go and travel to Copenhagen for the birthday celebration. She had to walk from her host’s apartment to Lund C to be able to buy a paper ticket at the ticketing machine using her bank card. Her original intention for the entire trip and that night eventually came into fruition, even after some delay. However, Ida said that the chances were near for her to just stay and enjoy the company of her host. Her case demonstrates that her position in the space in relation with the platform – that she was not part of the Scanian society for her to have possession of a Jojo Card – which had repercussions in terms of her choices and outcomes on that night.

The same was true with Flashback user Limma\_skinkbit where he says “generally I feel that traveling by public transport in Sweden is primarily designed for those who travel often and live in the city. Tourists and other infrequent travellers get [expletive]...” (Pavico, 2015a). Limma\_skinkbit, who does not live in Skåne, uses the mobile application instead whenever he has to go and travel in the region and use the public transportation services. For him, however, though he is an outsider in the sense that he does not use the Jojo Cards, and is not from Skåne, it felt as it was easier for him to switch to different platforms, given that to a certain degree he is from Sweden and have such necessary tools to adapt easily to the regulations of Skånetrafiken.

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<sup>1</sup> The Swedish singing competition where the winner receives the honour to represent the country in the Eurovision Song Contest.

These two stories tell us that from an peripheral perspective, the use of particular systems and platforms involved the issues of citizenship in a particular locale. When talking about citizenship here, we are not pertaining towards the political facet of citizenship, but rather on the other facets of the sense of belonging such as ethical and aesthetic practices of it (Prauscello, 2014). The two facets, the ethical and aesthetic practices of citizenship refer to how the people must be knowledgeable on the implicit and the explicit rules (ethical) when one is in the specified spaces, and also how one carries themselves out in these spaces while conforming to the rest of the rest of the population, such as the possession of cultural productions like the Jojo Card (aesthetic practices).

Performance of citizenship or performance using certain platforms generates a sense of construction and “projection of a strong sense of civic identity and unity.” Usage of main platforms creates this image of a “perfect citizen” (p. 105). The perfect citizen, in the case of Skånetrafiken would be to know the rules of accessing the system and even the conventions once one has accessed the system, in addition to having the Jojo Card as the platform to access the system as it transaction is very efficient and investments on the technology has necessitated it to be used as the preferred platform. These are values that Ida can never attain given her situation as an outsider, in which she sees it as an inconvenient means to travel around the region. By Ida’s comment, her statement that, “I do not live here”, gives a sense that certain options, ways, and rituals are meant to just be performed by citizens of the area. Inversely, there are platforms available for her and her “kind” to use to be able to access systems.

In connection to this, Rachel Aldred (2010, p. 42), in her article in the journal *Social & Cultural Geography*, she implies that those who take up cycling are creating a sense of citizenship, and even an identity for those who do take part in this mode of transportation in Cambridge. Even if they are still considered as a minority in the area, there is still that sense of belonging as these people are visible to each other on the road. Christina Sefcik in her MACA thesis also relates that the use of a bicycle in Lund for some informants meant giving them the sense of belonging in Lund (2012, p. 43). What is problematic however in the case of the non-users of Jojo Cards is that there is no way for them to feel that sense of citizenship, even as a minority. As identifying other non Jojo Card users was hard to do, outsiders such as Ida cannot empathise with others as they cannot be easily be identified. This was something that I also personally experienced during my difficulty in looking for possible respondents. As usage of

platforms and systems creates a sense of shared identity, it also creates an imagined notion of “us” and “them” (Anderson, 2006, p. 32; Becker, 1997, p. 101). And in Ida’s case, it is just them, the citizens. The imagined borders are predicated on the use of the material platform, and the customs and rituals associated with using the platform and once one has accessed the system. The absence of the platform for the non-users isolates the person to the rest of the population: “but *I'm* not a resident, why would *I* have it!”.

This is also the reason why Karl and Kevin chose not to use Skånetrafiken without their host. Karl from Switzerland and Kevin from the Philippines were visiting some friends living in Lund. One day, as their host had to work the entire day, he left instructions with the address and all necessary information regarding going around town and using the Jojo Card. The host and the guests agreed to meet up at some point in the city. When the tourists finally arrived at the meet up point, they never used the card, and even left it at their host’s apartment. According to them, they felt quite uneasy as they “do not really know how to use these damn cards”, even if Karl has visited Lund numerous times before. These coded languages that happen in the context of Skånetrafiken’s buses made them feel uncomfortable, as they did not understand the conventions that happen inside the buses. For them, it would be comfortable to use the bus when their host is with them, as what happened on their way back after meeting with their host in the city center. Being with their host made them feel that they could now be able to take his lead in following the conventions within the system.

The case of Karl and Kevin suggests that not only are there rules in using platforms, but once you have accessed the system, there are also rules that one must follow, implied and otherwise. Once one enters a system, there are rules both implicit and explicit rules one must follow, and failure to do so would follow mean social or legal ramifications (Becker, 1997, p. 131). For them, choosing to walk to the city center instead lessened the risk of breaking any social or legal rule, which also lessened their feeling of discomfort of being perceived as outsider. Inversely, they also saw those that use the system as the “others”, or taboo, and with the guidance of someone who has been acclimated with such ritual of using the platform and accessing the system would help them learn through observing their host and asking questions about the practices and performance relating to such situations (Becker, 1997, pp. 41-53).

Becker’s notion of guides is integral in introducing the outsiders into using the system seamlessly. As they have done the process themselves, of learning how to perform correctly

within the system, outsiders such as Karl and Kevin find it easy to identify themselves with their host as he was an outsider once, and they would always depend their choices of how to access the system to their host, unless told otherwise. The hosts become an unofficial ambassador of the use of the system through this way. In a discussion with Rui Lui who is simultaneously writing her MACA thesis on Chinese tourists visiting friends and family, she relayed that the transportation options of the tourists mainly depended on their hosts. Whether they would travel by themselves or with their hosts, they would always take the lead of their host. Given the multitude of rituals, rules both implicit and explicit, the insiders, or the guides are there to teach or serve as examples on how to emulate one to be perceived as part of the group (Becker, 1997, pp. 41-53), and in this case being able to access the system properly and without any delays in the flow.

In the cases where they would travel by themselves, they would borrow their host's cards. With the Chinese tourists, Ida, Karl and Kevin, all of them took the decision of leaving the transportation decisions and suggestions to their hosts as they assumed that their hosts know absolutely everything that has to do with transportation options in the region – which is that using the Jojo Card is the only solution for traveling within the region. The hosts would think that way as they have gone through the process of living in the region and having that mode as locals. The so-called guides know the best options for themselves, but failed to see that such platform would not be friendly for their guests, even if they pass the card on to them to use. Linking back to the intermediaries and mediators, there are several types of mediators that are interacting with the outputs of the intermediary, whether the intermediary in question is the Jojo Card or Skånetrafiken.

Reflecting on Limma\_skinkbit's comment, people assume that the only option that is best for the system is to use the main card. But with the interviews, there seems to be a rejection of these people to the card. When asked about traveling options for tourists, Skånetrafiken's Martin Güll (2015) relays that there are in fact methods that tourists could choose from for them to be able to travel around the region with ease, such as the three day card, or the Öresund Card. These are options in which hosts were not able to relay with their hosts. As it is, there are problems of how hosts must tell their guests what options are available for them. Given the presence of other platforms, both the system and the guides or ambassadors of the system must be able to relay to their hosts what the options are.

However, even if outsiders have platforms that are seemingly made for them, there is this problem of the performance of citizenship once one has gained access within the system. Linking back to the case of Karl and Kevin comfort and familiarity towards the system entailed knowing the rituals and practices during the time of accessing the system. It also required knowing the written and codified rules that must be considered during the time that they are within the system.

### **Secret Deviants**

As the previous people I have spoken to regarding the use of systems are those who just stayed in the region for a limited amount of time, the quality that they all shared is that they are outsiders in those instances. However there are other individuals who do not share the criteria of the previous informants but could still be considered as an outsider through his methods of accessing the system.

According to Becker, there are four kinds of outsiders based on deviance, and this is measured on a.) how they are perceived, and b.) if they take an obedient or rule-breaking behaviour. These four categories are, 1.) the falsely accused, as someone who is perceived as a deviant but has an obedient behaviour; 2.) the pure deviant who is also perceived as a deviant and takes a rule-breaking behaviour; 3.) the conforming, who is not perceived as a deviant and takes an obedient behaviour; and 4.) the secret deviant, someone who is also not perceived as a deviant but takes a rule-breaking behaviour (1997, pp. 19-39).

For the Ida, Karl and Kevin, all of them shared the sentiment of having been scared of being categorized as a falsely accused user in the system. They identify that they are not from the region and assume that they will be easily perceived as not part of society. To add, not knowing what they should do when they access the system without the presence of their guides also pressured them for the fear of becoming a pure deviant.

However, for some who are living in the region, there are also those who would go and use the system as they are not perceived as a deviant as they are white, has a native grasp of the language, but would take a rule-breaking behaviour. Andreas, a student from Malmö Högskola is someone that can be considered as a secret deviant at some point in time. Andreas is originally from Gothenburg, has lived in Canada for some time and now is based in Malmö since the start of autumn of 2014. As he is studying at Malmö Högskola, he was able to receive his first Jojo

Card when it was being handed out for free in his campus. At first he was able to use the card and load money in it, and has accessed the system until he ran out of credit in the card for him to be able to ride again. As there were no ticketing machines near his place of residence or his campus, he did not have the time nor willing to go to the ticketing machines at Malmö Central Station to be able to load more credit in his card and eventually use the system again.

Eventually he was able to get a bike, which enabled him to traverse around the city without having to use Skånetrafiken. But there are those days, when it is too cold, or if it is raining, where he would find the need to use the system's services again. In times when he would need to use Skånetrafiken's services, he would use the mobile platform to buy his tickets before hand, and would activate the tickets "only when it is needed". The bus route that he only takes is the bus line 5 in Malmö, which uses a different type of bus, and dubbed as Malmöexpressen (Malmö Stad, 2014). The physical standards of the Malmöexpressen bus is longer lengthwise than the usual city bus and passengers may enter in all of the passageways of the vehicle. The bus drivers of this line do not check the validity of the cards as they are in an enclosed space. When he decides on using the system at any given moment, Andreas would just go in the vehicle and just proceed and find a place. In the rare occasion that there would be a ticket check officer who would come and verify the transactions, he would be quick in activating a ticket that is stored locally in his phone's application. As he does this, some of his friends have commented that "if you're doing what you're doing, what is stopping us from doing the same thing?". He was also conscientious with his actions, of using the system without having to rightfully pay for the trip, but at the same time, in a different instance he also disclosed that "I'm a fan of cheaper prices, being a student and all", and in this case not paying for the rides at all.

Another case was during my fieldwork in Värnhem bus stop in Malmö. It was 15.00, on a weekday, the same time as children from the school nearby would finish their classes and would go to their respective homes. As a bus arrived at the stop, about 15 passengers started to line up. There were two passengers in their teens who were from the start, huddled together and after some time, distanced themselves from each other in the queue. The first one was able to queue in the front of the line with a sizable amount of people lined up after him. After he successfully made his transaction and proceeded to the middle of the bus, the companion was waiting for the first one just outside the middle access point of the bus. As the doors were closed shut, the first was holding his own card that he presumably used in the earlier transaction and then slipped it in

the gaps of the doors and gave it to the companion. He then lined up and was eventually successful in transacting with the system with the same card.

These two cases, of Andreas and the teenagers in Värnhem demonstrate how a different kind of outsider could interact with the system. The secret deviants possess a different kind of quality as compared to the earlier set of outsider. As they are embedded in society, the two cases show a certain degree of necessity and confidence to continuously access the system. As with continuous performance, they would eventually learn how to access the system and assess what kinds of limitations and benefits using each platform.

In Becker's pursuit of understanding the Outsiders, he argues that it is not enough to just label groups as outsiders and be done with it. To be able to help such groups, an elaboration on the motivations and reasons why such people act the way they do must be conducted (p. 186). As for the case of Andreas, the limitations of the Jojo card pushed him to become a secret deviant as there is no convenient means to continue and using the said platform to be able to access the system. During the announcement of the cashless policy of Skånetrafiken in 2011, Ulrika Mebius, the Information Chief at that time, responded to a question pertaining to the lack of available machines in most stops. She said: "It is of course a question on the cost to have machines on all stops in Skåne. It is also about maintenance of the machines and vandalism of those that are placed in more distant stops" (Sydsvenskan, 2011). There were no other means for Andreas except to load the card either in the main stations and stops to load his Jojo Card whenever he needed to. Throughout the course of interaction with the system, he learned that by using the other platform, the mobile application, he can use it as a cover to not pay since his set route allows him to be able to access the system without even conducting a legal transaction with it. As far as Andreas is concerned, the complication of rules pushed him to do such actions.

By doing so, Andreas and even the children at Värnhem were able to learn the loopholes of the available platforms through their performance within the system. By having confidence in the performance, this kind of outsider has full control of citizenship while accessing the system. For Andreas, he spoke of his intentions to follow the rules – such as loading his Jojo Card, and doing it in a legal manner. However, the complications of loading the card made it inconvenient for him to follow the rules. And as he now knows how to take advantage of the system, it would take something else, other than rules, for him to access the system in a legal manner.

In contrast to the first set of outsiders, these secret deviants showed confidence and citizenship in the system. However, both groups are pushed away from the centre by the implicit and explicit rules and limitations of accessing the system, which are either created by the system itself or its members. Though Andreas is pushed to become an outsider by the rules set by the system, what makes it interesting is that he also shares the same effect with the earlier set of outsiders by the power of their peers in making him rethink his values in accessing the system. "Why should others pay when you don't do it", someone commented when Andreas made known of his actions to other people.

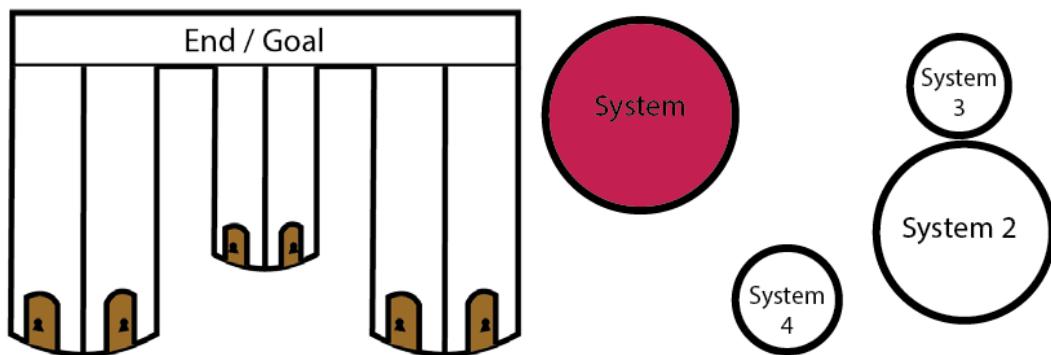
Although not really an outsider (based from the categories), I present the case of Lukas, a 21 year old bartender living in Malmö. As he uses his bike for most of his trips in Malmö, he would be using Skånetrafiken when he finds himself in the presence of his non-biking peers, traveling with him. For the visiting tourists, the secret deviants and for Lukas, the presence of peers has an effect in influencing actions with regard to the choices that people make in terms of reaching an end or a goal, which is to travel from point A to point B. Though the effects are different, such as becoming a model or guide for the visiting tourists, to awaken the conscience of the secret deviant, and becoming a passenger in communion with the non-biking peers of Lukas – I argue that the presence of peers help in influencing such groups.

## Accessing the System: A Metaphor

At that time when Earl E. Mac Cormac was writing his book on *Cognitive Theory of Metaphors* (1985), he discusses that the use of metaphors has been widely accepted as a cognitive device when discussing complex concepts. By being able to simplify such concepts, it enables readers to be able to bring forth a pedagogical understanding of these concepts. Just like in Michel Foucault's book, *Discipline and Punish* (1991), the metaphor of a prison and the dynamics within the referential prison, and how a metaphorical prison represents the dynamics of discipline and punish in other scenarios (1980, p. 38). This subsection takes a more conceptual turn rather than focusing on the empirical data. As Foucault paints a metaphor for the sake of discuss the overarching themes of discipline in different contexts, in my thesis, I aim to examine the empirical material to be able to come up with a metaphor and in the end seek for a better perspective in other contexts regarding systems in their paradox of exclusivity.

### Tower Shafts

The initial view on Skånetrafiken and the theories had made me think about using a metaphor. It is easier to think about platforms as a door in which to entry way towards a particular system, or in this case, a shaft. These shafts that we see below would lead into a common plane for everyone to reach their end / goal.



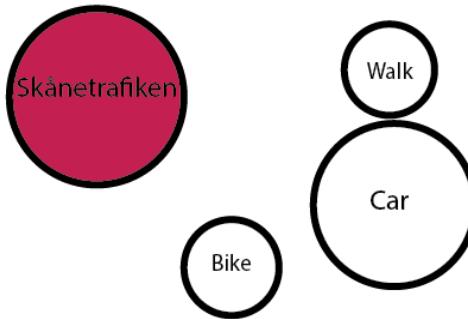
Each shaft, or system has different methods on how to access them. Other shafts are available for one's choosing to reach that common goal. These shafts are closed off as there would definitely have certain requirements that need to be fulfilled to be able to access such system.

The definition of a platform, as noted in the introduction of this thesis, is “a raised level surface on which people or things can stand”. In order to dissect this definition further, we must dwell on this metaphor a bit - as what Heidegger (1971) did when differentiating and linking the concepts of difference and deference. We see that platforms acts as doors that would either hinder or allow entrance to a particular system that leads to that sense of equal-ness. Looking into it as a mere plane is simplistic, as there are certain specifications and pre-conditions for you to finally reach that plane. These platforms in themselves have their own set of regulations attached to them, which is unique to each platform. This could be seen as the keyholes to the doors. Accessing these platforms hold certain preconditions and regulations for you to be able to grant access to the system, and eventually to this plane of equality.



Figure 3: The Jojo Card and its regulations (Right)

The key holes would have their own set of grooves that is set by the limitations of the platforms themselves. This does mean that even if you have one right component, you will need all the other components to slide through the grooves of the key-hole in order for a smooth fit when you turn the key in. Contextualising this metaphor with Skånetrafiken, there are a variety of means for you to be able to access the system. Such means are using the Jojo Card, Cash, Mobile or Bank Card, and other variety of platforms to access the system. But as it is, there are requirements and regulations that are attached in each platform. You cannot just have the Jojo Card, you must also need to have a certain amount of credit to be able to use it. With the image above, the Jojo Student Card has a different set of rules that must be followed, such as the possession of a valid student identification card, for the logo of Skånetrafiken to be in the student ID, and coupled with another form of a government-issued identification card for the transaction to be valid, or in the metaphor's case for the key to fit.



In terms of reaching a certain end or goal, such as, in this case getting from Point A to Point B, Skånetrafiken has no monopoly of being the only mean towards this particular end. There are certainly other ways in reaching that objective of transportation as we see in the diagram above where other systems are present. Ida, for example had to walk first to be able to reach the first goal of reaching Lund C, where she, when taking the train switched to the Skånetrafiken system to be able to reach Copenhagen. Karl and Kevin chose to walk to be able to meet with their host instead of using the Jojo Card to be to go and use the city bus.

The system of cars, for example, passes as a system and a platform in itself depending on the situation one is put in. Here, the usage of a car would necessitate the user to have first and foremost the presence of a car, the keys to the car, gas in the tank, and the license to drive the vehicle among other things. Andreas, when the conditions are ideal, such as the weather and if his bike is functioning, would cycle in his daily commute to his university. With these cases, we see that there are different systems available for one to take, and that the choice is dependent on the situation of the subject at those given times and if conditions would allow for the use of a system.

### Revolving Doors

*Things can change if they have to, sometimes they stop being what they are - they remain hostile, unavailable, inaccessible; but the being of these things, their idea, does not change: the idea is definite, it is sure, we even call it eternal.*

(Keenan, 2004, p. 152)

Referring back to the metaphor, access points to the system act as doors that can act as a barrier or a passage way to itself. However, when these platforms do not function as what they are supposed to do, this becomes problematic for the system. During these times, these doors to the system would have at least two scenarios: they would stop being what they are – as platforms

or passageways to the system; or these doors would allow everyone into the system. I would like to call this scenario the revolving door moment.

One example was during the trip I had in Värnhem bus stop in Malmö. The bus to Nobeltorget arrived late, with the driver looking stressed: the bus' card reader was not functioning properly. It took time for the bus driver to verify all the incoming passengers, as the device was only reading every other card that is being tapped into it. The driver had to order some passengers to go back and re-tap their cards back to the reader. The whole process left the passengers agitated as they felt that the driver was treating everyone as deviants, as people who are trying to take advantage of the system during this time of unreliability of the main platform of Jojo Cards. The younger people whom the bus driver ordered to re-tap the cards were saying foul words toward the driver while the driver only responding in surrender: "what should I do?". The reader stopped being a reader for everyone. This meant that the turnover from one passenger to another is stopped and that all the succeeding trips have now become delayed because of this.

In this scenario, the platform has not become totally disabled as there are some cards that can be read in the first time of tapping. However, this entailed that the whole efficiency of this part of the system has become null due to this malfunction. With the bus driver acting as a guard to control and ensure that everyone's cards have been tapped and read correctly by the system, the drivers also make sure that the best interest of the system is still being served given such situations. When looking at actor networks, when one component stops functioning as what is designed to be, it affects the entire network as it stops functioning as what is designed, other actors such as the driver would have to take the burden for the network and for the system to be working as normally as possible.

On another scenario, however, the bus line 5 in Malmö, as discussed in *Secret Deviants*, allows passengers to enter in all of the passageways of the vehicle. The driver's area is secluded from the riding public. And with this feature, the driver would not have the role as a ticket controller as readers are also installed in each passage way for the passengers. During my go-along with Andreas, we took the line 5 bus from Nobeltorget to Malmö Högskola and vice-versa. During these trips, we noticed that the readers were displaying "not functioning" on the screens. As the driver does not serve as a watch to be able to control the flow of people coming in, people can access the service without ever tapping their cards to the readers to subtract their remaining credit in the cards, or to pay on their mobile devices for the trip in those instances. In

this scenario, the system continues to function, but it has allowed everyone to access the system without ever having that transaction for that particular trip. The absence of a control or a stop-gap method (as what the bus driver to Nobeltorget did) made it possible for anyone to access the system.

However, there are also cases where the controllers are available but would also entail putting a halt to the access to the system. An example of this would be with the supermarket chain Coop and an incident with their stores during the start of April of 2012. Coop's payment system has experienced some down time and payments via bank cards could not be verified by the system (TT, 2012). This meant that for customers to be able to complete transactions with Coop, people must use other forms of payment for them to proceed. Even though with the presence of controllers, in the form of the cashiers, it was still impossible to access the system as there was no fall back in terms of proceeding with that transaction. The metaphorical door has stopped working, and forced people to use other methods of payment to them, which caused delays not only on the user's side, but also on the system itself, given that the problems happened the day before the Easter weekend, which is an anticipated day by the shop given the high sales during this period (Dagens Handel, 2012).

When looking at the two systems, Skånetrafiken and Coop, we could see the similarities such as the use of platforms, but an essential difference between the two is in the acquisition of money. As with Jojo cards, the money is within the system once the user loads money into it, the Jojo card registers that it has x-amount of money and that amount will be deducted every time the cards get tapped on to the readers on the buses or in the machines in stations. For Coop however, the money is saved onto the card of the user, but that card is not part of the system in the first place. The system adjusts itself to the existing standards that are available (Visa, Mastercard) and does the transfer whenever the users execute their transactional ritual: putting the card in the reader, inputting the code to authenticate the transaction.

With these differences, it could be assumed that for Skånetrafiken, problems with platforms can become negligible as the money is within their system to begin with. Income is already within the coffers of the system that would enable Skånetrafiken to exercise its Skånetrafiken-ness even though the card readers stopped being what they are during those moments. Given that transportation is considered as a utility, it must aim to continue to serve

people even though the system has some conditions that are not working as it should be. However things would differ when problems would arise on the side of the user.

While I was out in Malmö in December 2013, it came to the point that my credit in the card were not sufficient to be able to take another trip. As traveling by bus, one would only get an idea of your credit if you remember to look into the reader's screen during your previous trip as to how much credit is still left after that transaction. Aside from that and going on to the internet and see how much money one has left in his card, there are no options left for one to see it. When that time came when I had to tap onto the reader, I was not sure what was happening, or what the driver was saying, given that I have only been living in Sweden for three months at that time and had little understanding of the language. I was asked to step off the bus because of it.

As I could not understand Swedish at that time, the driver could not explain to me what other options I have to proceed with the trip. He could not explain to me that I could buy a ticket via SMS or via the mobile application given the lack of that common language between us at that time. This goes to show that having mere possession of the card is not enough to perform one's citizenship in a particular system; languages – whether it be coded or otherwise, are also needed when it comes to being part of that system as what was discussed in the earlier chapters of this study.

In contrast, after living in Sweden for over a year, in February 2015, when I was taking the regional bus from Lund to Malmö found out that my Jojo Card ran out of credit. During that time, my level of proficiency in the Swedish language was such that I could carry day-to-day conversations, and also the necessary tools such as the bank card with a readable chip, which is needed for me to transact via other platforms to be able to use the ride. But given as paying for the bank card takes some time in the turnover of passengers (of passengers hopping in the bus, doing their transactions and moving forward for the next passenger to do the same). The whole efficiency of the bus has been compromised by it. Reddit user Fnork relays: "Think you can get away by using regional buses? Now you [sic] everybody's [expletive]. Feel the scorn as you hold up the line while paying for your ticket." (Pavico, 2015b). As time has been spent on attempting to access the system on the first platform and failing in the end, more time was needed to think for an alternative, and choose an alternative platform to be able to transact with Skånetrafiken.

Adding to the conversation, user Famest continued: "My solution for this problem is to forfeit any chance of sitting down by going on the bus last". Given this issue of revolving doors,

Jojo Card members see that the non-members must become 2<sup>nd</sup> class citizens, be at the end of the line and forfeit one's chance to sit, and at the same time paying more than what a Jojo Card user pays. This is on top of how the other passengers would feel and perceive the one who is not part of the system.

Revolving doors also happen between one system to another, as the case of Lukas. As his life is generally contained within the city, he does not see the need to interact with kollektivtrafik that much. He would usually traverse the streets of Malmö using his bicycle as most of the places that he goes to such as work, gym and his significant other's apartment, of which are within a 20-minute biking radius from his own apartment. Of the very few occasions he found the need to use the services of Skånetrafiken was when there is a problem with his bicycle, when he was too inebriated to bike, or that it was just too far to bike, just like the time he had to travel to Gothenburg.

During those times, he found the need to switch from his main *system* of transportation to another option given the needs for these certain situations. During those cases, he would usually borrow a Jojo Card from his friends, or would buy a Jojo Card for himself, but end up losing it as some point, only finding about it when the need to use Skånetrafiken would be deemed as dire. The same thing happened with Andreas, as conditions of using a particular system becomes hard or inconvenient by switching to a different system are available to be able to reach that goal. According to him, when it was too cold to bike, he would just use the buses of Skånetrafiken using his Jojo Card (or the lack thereof). These two cases illustrate how the issue of revolving doors is not contained in one system only, but can be also applicable between systems as well.

Stephen Graham (2014), talks about designs in infrastructures and services as aiming to blend in to the background, and this blending happens when it becomes more efficient and intertwined with the part of the daily lives of people. He relates that as infrastructures become vaster, the more they blend in the background. The implication of this is that whenever the infrastructure stops functioning as what it is intended, the blending disappears, making these infrastructures stick out. When an unusually large mass of commuters are waiting for a delayed bus, it will become apparent that a disruption within the system is happening which would give the revolving door moment for the would-be users of the system.

## Degrees of Adoption and Prioritization

Both Lukas and Andreas showed no hesitation with the presence of an order of prioritization with the different platforms in the system. Both confidence and performance of their citizenship in the system and in society made them feel comfortable in adopting to new policies and even switching from one system to another very easily. Both cases also show that adoption from the moment of necessity is quite quick with these two and that both showed appreciation toward the system, that services are available during the time of need to use such.

However, not everyone can switch platforms or systems that easily, or is as comfortable with the presence of an order of prioritization with the different platforms in the system. Lina, who used to work Arriva, a contractor for Skånetrafiken in which they would supply the non-driving manpower in the trains, buses and stations. As a ticket controller for trains, she would get asked about different questions regarding ticketing and the reliability of trains. One of the biggest concerns that she received during her time working for Arriva was that people were having problems interacting with the machines and being able to transact correctly with the system. She also shared her opinion along with the concerns of the other customers she has had interacted with. In her opinion, it was a “stupid thing that you must load money in to the Jojo Card to be able to get the discount”. The saying, “you must spend money to make money” coined by Roman playwright Plautus is applicable in this conundrum.

Another conundrum that is applicable is the Catch-22 situation, that you must take in more to be able to reap the benefits. However, not all have that capability of paying more.

There was only one catch and that was Catch-22, which specified that a concern for one's own safety in the face of dangers that were real and immediate was the process of a rational mind. Orr was crazy and could be grounded. All he had to do was ask; and as soon as he did, he would no longer be crazy and would have to fly more missions. Orr would be crazy to fly more missions and sane if he didn't, but if he how sane he had to fly them. If he flew them he was crazy and didn't have to; but if he didn't want to he was sane and had to. Yossarian was moved very deeply by the absolute simplicity of this clause of Catch-22 and let out a respectful whistle. (Heller, 1961, p. 52)

The applicability of the catch-22 situation is that only those who travel using the Jojo Cards are the only ones getting the discounted rate, in which most of those who do have the platform are embedded into society with the necessary tools and tenets to be able to adopt to such platforms easily. Those who need the discounted rate the most are the ones who do not have the tenets that the other members have, rendering them incapable of spending money to be able to save money. As mentioned earlier, Andreas and Lukas seemed to not have an issue with the price differentiation for the various product offerings of Skånetrafiken. The presence of different tools available such as the enrolment in the student loan (Centrala Studiestödsnämnden, CSN) or even having a job, gives them this degree of embedded-ness into the society. These tools offer capital inflow that would make the differences negligible for them as they are capable of paying for it (Harvey, 2012, pp. 12-20). But we have to remember that these are the people, Andreas and Lukas who can live with it because they are capable of dealing with the ramifications. As Harvey narrates the rebuilding of Paris by Haussmann, he had an image of how the city and the neighbourhoods would be, and with it, he had this idea of what kind of people will be living in the city. This links us back to the idea of Plato's "perfect citizen", as someone who is and can adhere in the ethical and aesthetical levels of citizenship (Prauscello, 2014, p. 105) as what was discussed during the subsection on The Outsiders. On the other side of the coin, although Lina is a native of Sweden, and in a way, embedded in society, she has had the experience of working within the system and has seen how the policies affect outsiders through the interaction with the system.

However, it is worth noting that even though Andreas said he did not have any issues with the pricing differences, his actions by becoming a secret deviant at some point and saying that he is "a fan of cheaper prices, being a student and all" say otherwise. To some extent, Lukas' decision on using bikes almost exclusively tells something with regard to the sensitivity to the price of admission in using the Jojo Cards.

We proceed with the case of Gina, an international student in Lund and also working part-time in Malmö. She has been in Sweden for almost two years, in which she has had a variety of jobs in order to support herself financially while studying in Sweden. She has been using the bike and accessing the Skånetrafiken depending on her end / goals during those periods and feels comfortable enough to be part of Swedish society. One week before her salary was going to be deposited to her account, she was needed to be present in the office in Malmö that week (she

usually works from home, on other days). She checked how much credit she had left in her Jojo Card, but realized that it would not be enough even for just one leg of the journey (38,40 SEK per way using the Jojo Card). She checked her bank account and to her surprise, she had less than 200 SEK in it, which made loading money on to the Jojo card impossible. But the balance in her bank account was enough for two trips even on regular fare (48 SEK per way) for that day when she had to be in the office. She had the decision of: 1.) going through with accessing Skånetrafiken using the mobile application and buying tickets at regular price via her bank card, or; 2.) asking her boyfriend to transfer at least 200 SEK to her bank account and eventually load it into her Jojo Card at Lund C, and paying for less than regular price by doing so. In the end, she chose to proceed with the second option of borrowing money from her boyfriend instead and spending less than what she would have paid if she chose the first option. She is thankful that she has someone to run to, someone who is well embedded into society, and who has a steady flow of income as she “would not know what to do without him”. She also wondered about if she did not have the tool in the form of a Swedish bank account, her boyfriend would not be able to send money in time as well.

Gina’s case demonstrates that the presence of tools and connections have helped her in spending less in the price of admission with the system. This is in line with the case of Andreas and Lukas, with the necessary tools having an effect in their perspective with the pricing differences, as both of them have more tools that are enough for them to carry the price of admission effortlessly, both Andreas and Lukas can naturally adapt to and use the system whenever they feel necessary. Gina on the other hand, not fully embedded with regard to the tools that she has, has experienced the dilemma of either spending more and not bothering her partner, or borrowing more from her partner but eventually spending less as an end result.

The situation is an effect on the different policies and reactions toward such policies by the different parties involved, as what was discussed in the earlier section of *On the Creation of the Platform*, specifically on the discussion of the actor network theory. Harping on Stephen Graham’s chapter on Disruptions, he also relates that these infrastructures are not automatically accessible to everyone in the spaces of the infrastructure; access also depended on the privilege of the users (2014, p. 469). This leads to the issue of the “Matthew Effect” wherein the rich become richer and the poor become poorer (Merton, 1988). In this context, what is happening is that cumulative advantage is received by the people who are already advantaged given that they

possess the tools to make them embedded in society, while those that need the benefits are predisposed to not receive these advantages given the lack of tools needed. Whether this effect is used in terms of the opportunities for the Nobel Laureates back when Robert Merton has written this, and even with Skånetrafiken, we see that the phenomenon affects the most vulnerable groups in society, whether it is new scientists or underprivileged passengers.

As a link to the discussion *On the Creation of the Platform*, Martin Güll (2015), the decision for the 20% discount on the fares through the use of the Jojo Card platform was a decision given by the traffic council at Region Skåne. He added further that the travel cards in places such as Oslo do not even have the discounted pricing as what was given to the travellers of Skånetrafiken. However, even if it is the case, this thesis saw that the sign and symbol of the Jojo Card has become predominant in the perception of those who own one and even to those who do not. As the Jojo Card platform brings efficiency in the operations of the system as it became the standard to traveling, and with those owning the card showing superiority and wanting priority over the others who do not have the Jojo Card, with someone commenting “Think you can get away by using regional buses? Now you [sic] everybody's [expletive]. Feel the scorn as you hold up the line while paying for your ticket.” (Pavico, 2015b).

Given the technical and financial limitations of the main platform, it is difficult for people such as Andreas to load his card as he does not pass through a machine in his daily routine traveling from Nobeltorget to Malmö Högskolan. Even loading the money via online payment was hard as it takes 24 hours for it to top up as disclosed by Martin Güll. In which according to Lina, “the convenience of the Jojo Card is not always there. Where is the card or the money in the card when you need it the most?” (Lina, 2015). On a positive note, the platform provides ease and comfort in traveling, it can easily be transferred or lend to other people, and even provide business insights to the system for them to become more intelligent and better in providing services to its passengers (Güll, 2015).

Given this man-made policy along with the technological benefits of the platform, the materiality of the Jojo Card has risen to something that holds so much meaning to the passengers that gives them the feeling that they must be serviced first than everyone else given how embedded the platform is in its services. On the other hand, the technological and financial limitations of the platform make it hard for the outsiders to cope with the demands and the price of admission, maintaining their position in the society.

If a platform that has the ability to hold the meaning to create the distance from the outsiders, but at the same time have difficulties in terms of providing better service to the people using the platform as it is well embedded, should the system still use it, or should the system change the main platform? Should there be a preferential prices of admission with regard to the different platforms a particular system has? If the main platform provides discounted rates, why could the man-made policy not be changed into something that can be applied into all the other platforms making access more accessible and more convenient for people? Especially for the more vulnerable groups, those that are considered as outsiders and those that are in a precarious situation of somewhat in the centre but is in the risk of pushed to further to the periphery in different moments.

## Discussion

The Swedish society has prospered by the turn of the 20<sup>th</sup> century given the fact that most of the citizens were being provided with the same safety nets by the social security system – everyone was provided the basic social services such as education, pension and health care to name a few ways in which the country helps in creating this equal society for its citizens (Wallengren, 2014). However, with the demands of globalization and of the greying population among other events in the mid-1900s, it was deemed necessary for the Social Democratic government to open the doors to people from different backgrounds to be able to increase the productivity of Swedish industries through increased labour in the aim of strengthening the economy of the country. This decision has helped Sweden cope with these demands, but at the same time, social problems have risen as inequality with the individual tools has increased. Suddenly, even if the policy was there to help the Swedish people and their industries, rhetoric of “us” and “them” started to prosper.

As with the Jojo Card, the technological and the pricing preference given to the platform provide this sense of the “us versus them”, which happened in two waves. The first wave was through the demands asked by the traffic unions. Given the policy of forbidding traffic workers to handle cash, the technology of travel cards was able to solve the problem brought about by the policy.

Referring back to Munroe’s (2015) comic strip, the new standard, or the platform was able to successfully eradicate the platform of cash transactions with the directive taking effect after two years of introduction of the Jojo Card. However, it also gave birth to allowing the cash payments to take another form in the form of paper tickets bought in the machines.

With this policy taking place, which forces everyone to switching from cash transactions to Jojo cards, the adoption process is being highlighted and we see that different questions and concerns arise when talking about the ramifications of the new policy, as can be demonstrated by this Question and Answer session that happened between Skånetrafiken and different townsfolk (Sydsvenskan, 2011).

As people have been conditioned to have cash payments as the norm, Skånetrafiken breaks that condition which is partly based from the different actor networks. With these changes, there would be some tension arising, just as the individual who frustratingly wrote the letter to Skånetrafiken (Bergquist, 2011). In relation to this, former Interpol President Björn

Ericksson, in an opinion article, points out that amidst the move towards technological innovation and new conventions there will certainly be risks to further marginalize sectors in society (2014).

The second wave was the exclusion that was experienced by the first set of outsiders. As most people have adopted the platform, the system has become more efficient in the turnover between passengers who use the main platform to access the system. However, that efficiency is broken as different and less efficient platform interacts with the system. This creates the tension between the centre (i.e. those that have the main platform) and the periphery (i.e. those who use any different platform but the main one) to be able to access it.

The outsiders have felt uncomfortable towards the use of the system, the study of Zachrison (2014) comes into mind when talking about the adoption process of the outsiders with the system. The informants were interviewed and observed in a vacuum and these notes only hold truth on the time of the recording, as is like Heraclitus' analogy of the stream (D. W. Graham, 2007) as the responses would never be the same again. Zachrison argues that people's fluency depended on how they perceive their position in society. He also argues that adoption is a process that takes time for people to be comfortable in their performance.

With the outsiders, we would never know what would have happened with them after the interviews were conducted and should they stay a bit longer, or change their reasons for being in the region (i.e. to live instead to just visit), their uncomfortability would change and would have to adapt to the new system that they have. Regardless of this, the data that was gathered during the time of the interviews still holds truth and still needs to be addressed.

Limitations and restrictions posed upon the users would urge a certain percentage of people who have all the intention to transact legally, but with these coming into play, they would be forced to do something that is illegal in the eyes of the system and of the law. The same is applicable in the realm of media consumption and piracy. As releases with respect to movies are not conducted simultaneously in different parts of the globe, a share of users who are willing to pay for content at that moment are not given options to conduct business because of the limitations that are present in each country. As they proceed to download the content without having to pay for it, they are deemed as offenders. Even for those that are paying for content in systems such as Netflix, as the selection of movies are different in each region, some are forced to do workarounds through the use of virtual private networks (VPN) to be able to access content

that they deem they have paid for anyway. The system still considers this as something that is illegal, but they themselves are bound by the rules set by the different actor networks in the form of movie producers and distributors. However, the system understands the problem and is aiming to correct the system to force the other actors to agree to a global license to have uniform content in all markets (citation needed). This trend of the systems, of understanding the errors of their policies has yet to catch up as the crackdown on piracy is still on high alert. With the recent crackdown of online pirates in Denmark (citation needed), one must beg the question, should these players continue with their traditional methods knowing fully well that a lot of people do not adhere to these rules given their own reasons (not wanting to watch movies in the cinema, etc.), and at the same time, effort, time and resources are spent on pinpointing the offenders instead of fixing their own policies. As for Skånetrafiken, should they stick with their current methods or is an update to rectify the limitations or even the platform itself necessary? An example to demonstrate this is with the Swedish Government's Needle Exchange Programme wherein it gives an avenue to Injecting Drug Users (IDUs) to procure sanitary needles to lessen the risk of spreading HIV and other infectious diseases. Instead of reprimanding IDUs, understanding their needs and helping them make better choices was the better option instead of punishing them (European Monitoring Centre for Drugs and Drug Addiction, 2015).

For both kinds of outsiders, their peers played a significant part in the influencing of their transportation options, and to some extent, stand as a guide in correcting their methods while accessing their system. This is in line with my previous thesis that researched on the factors that determine the use of condoms among Filipino men who have sex with men (MSM) (Pavico, 2013). It was found that the Filipino MSMs were most likely to intend to use condoms on the influence of their peers rather than their knowledge and beliefs regarding condoms and sexual health.

In the creation of cities, David Harvey (2012), city planners and managers have an archetype in mind when thinking about the kind of people that would live in the different parts of the city. As with Skånetrafiken, the policies are thought of with the majority in mind. The majority being the people who have the sufficient tools to be able to cope and adhere to the rule changes of the system. However, what is being failed to look at are those people that would want to become part of the system, but are still having problems being integrated with it. Going back to Zachrison (2014, p. 15) noted:

There were some migrants who knew the language well, but still felt that they had problems blending into communicative situations with Swedes. They still felt, after many years in Sweden and in spite of possessing a rather good language ability that they did not succeed in developing their language ability further.

There are still people that would look like they are part of the centre, but there would be times wherein their situation would become precarious in which they could be an outsider all of a sudden even if they have the intention to access it. Such as the case with the benches situated in the train stations in Malmö (Edin, 2014). Edin argues that the intention was based from hegemony to have exclusionary design in the benches in these areas to prevent the homeless and the unwanted people out of stations, specifically giving the homeless people the chance to sleep in these benches. Using this in the context of my thesis, as these benches are designed and to exclude the homeless but at the same time make it accessible to the average Swede with legs long enough to support the body to be able to sit comfortably. But what is not considered in the design is the presence of the other people who are not tall enough to be able to sit comfortably when interacting with these benches.

As such, even though Skånetrafiken has had all the best intentions in serving those with Jojo Cards, the fact that it provides preferential treatment and at the same time hindrances to access makes it like the benches that Edin mentions and makes it hard for those people who were not considered in the design process to be able to enjoy the system and the platform as what it is intended to be. As platforms, and in this case, technology can integrate but at the same time exclude people, as discussed throughout the thesis. The CEO of Mastercard, Ajay Banga suggested in an opinion article that technology itself is the way in integrating the outsiders to happen (2014). Banga continued that technology that takes into consideration the local culture is essential in making innovative practices work. Given the societal impacts of the platform with those in the outsiders and to those that are vulnerable, rules, given that they are just man-made must be adjusted to be able to cater to such groups that need it the most.

Paraphrasing Löfgren and Willim, economies, or industries for this matter are not merely created through rhetoric alone, we also need to change infrastructures to mobilize ideas, people and capital faster (2005, p. 11) – something that the outcome of this thesis will address in relation to Skånetrafiken.

## Summary

This thesis was born out of my realizations in adopting into new systems, particularly with adopting to new rules and requirements needed to live comfortably and securely during my stay in Sweden. I realized that people have different experiences interacting with systems and different degrees of susceptibility to adopt these systems. To be able to explore the notion more and coupling this with my interest in transportation, I embarked on grounding this thesis through Skånetrafiken and their Jojo Card platform.

By using this as a case study, I aimed to understand how systems that try to be open encounter the paradox of excluding people in the process. Four questions were posed to be able to achieve the aim that was set. The questions are: 1.) What is the process of creation of rules and platforms of Skånetrafiken?; 2.) How do people become outsiders in the use and the non-use of systems and platforms?; 3.) What is the relationship between systems, platforms, rules and people?, and; 4.) Why can some people conform to rules while some could not? How do those who can not conform react to the system? These questions were answered in the different sections of the study, and will be reiterated shortly.

On a conceptual level, another aim was to conceptualize the issues and themes that come up with the case study to be able to contribute in the realization of systemic problems within society. By conceptualizing the case study, parallelisation with other systemic problems can be seen, and thus help in providing solutions to these problems.

Data was gathered through conducting interviews and observations from January to April of 2015. In total, the informants are composed of those who are just visiting and who are living in the Skåne region. Of those informants, some of them allowed to conduct a go-along for me to be able to understand how they interact with the system. Additionally, two online posts in forums, namely Reddit and Flashback were done to be able to get information on how people interact with the system, and if they do not use the Jojo cards as their means of access towards Skånetrafiken. Two interviews with informants from the side of the system were also conducted to be able to understand the rationale and intentions behind the policies and decisions that are taking place. Data was also gathered through different news clippings and online documents to be able to understand the policy and decisions, and how the media and those they interview react to it.

Through the utilization of the various data collection methods, there were four themes that were discussed thoroughly in this thesis: the actions and reactions within the actor network theory; on the periphery; the metaphor, and; the varying degrees of adoption.

The first theme discussed on the nature of Skånetrafiken, that it is a state-owned agency and it has different means on how to transact business with it. The first question, on process of creation of rules and platforms of Skånetrafiken was discussed on this section. The discussion also touched on the events that lead to the decision of having a cashless travel. The end decision of using the Jojo Card is a result of the different actions and reactions of the various actors in the network. With the decision, it has created efficiency, but also resulted with problems on adapting to the new rules and with the new technology, which resulted into new reactions and perceptions towards the system, which is in line with Pritchard, et al. on their study on London's Oyster Cards. This cycle of actions and reactions tend to end with the people's reaction toward the system.

The second theme discussed on the outsiders. This is where the second question on how people become outsiders in the use and the non-use of systems and platforms is answered. With the informants, there were two types of outsiders that were categorized: the visiting tourists and the secret deviants. For the first group, it was found out that certain platforms such as the Jojo Card held so much meaning in terms of one's performance of belonging or citizenship in the area. The platform was polarizing as they refused to opt into using the platform and sometimes even the entire use of systems were at risk. The second group is about the secret deviants, in which they would pretend to be an insider but are not transacting with the system as they are meant to be. For the interviewed informant, the limitations and rules are what forced him to become a secret deviant and do what he does. This kind of outsider needed knowledge and constant performance of citizenship to be able to successfully find a way to take advantage of the system. It was also found out that for both sets of outsiders, their peers made a huge impact in making them feel comfortable to use the system, and correct their behaviour while accessing the system. This theme is in line with Löfgren's notion that the availability of material objects can affect and instill the issues of class in the context of transportation. Löfgren is also in line with Arp Fallov, et al. about how prolonged presence, or in this case constant exposure towards the locality increased the confidence in using such systems and platforms.

The third theme talked about the metaphor and the issue of the revolving door. This answers the question on the relationship between systems, platforms, rules and people. Basing from the realizations from the earlier themes, I have abstracted the relationship between platforms and systems, being platforms are the ones that stand as doors or access paths towards a system, in which a system would lead to an end or a goal. However, problems also arise when there are irregularities within the system or even with the platform. The irregularities could cause everyone to access the system, or exclude everyone, or proceed with the processes but treating everyone as not from the centre while losing efficiency. The presence of controllers takes precedence as they would influence the outcome of the possible scenarios when this happens. Given the existence of prioritisation in the different platforms in Skånetrafiken, this is in line with the study of Meneses-Reyes on how the mere presence of options is not enough but equal treatment and focus must be given to these other platforms for cyclists or in this case non-users of Jojo Cards can use systems comfortably.

The fourth theme discussed on the varying degrees of adoption, which also answers the last research question. Education, student loans, a Swedish bank account or a job present as tools that would dictate how embedded one is in society and would also dictate how well one can cope with the changes with policies and rules, and even their level of susceptibility in adhering to the rules. The Matthew Effect happens with systems when there becomes preferential treatment in the prices of admission in the different platforms available in the system. With this, those that are more embedded in society, as they are more capable in adhering to the rules get to receive the benefits from the preferential pricing of admission while those that are vulnerable are the ones paying the ultimate price as they do not have the capability to adhere to these man-made rules. In the end I questioned whether it was necessary to just have the preferential treatment in the main platform, or is the main platform worth keeping at all. With these findings, it is in line with Pritchard, et al. and Poole, et al upon their finding on how technical systems would be harder to adopt by outsiders and for those that are in more vulnerable positions in society.

The findings of this thesis aim to understand the dynamic between regulations and platforms through the shared experiences of the so-called outsiders. The themes that were discussed are not exclusive to the subject of Jojo Cards and Skånetrafiken alone. This thesis attempted to give further understanding on how systems and regulations play a part in the formation of attitudes towards systems and materialities. Through implicit and explicit

regulations, perception and actions of people change whether they will be incentivised or feel excluded in the system. This would not only provide insights and assist Skånetrafiken in understanding the implications of creating platforms, but for other technologies and other types of problems that arise from the same sort.

Further research can also be done for the knowledge extracted in this study to grow even more. As only those that did not have Jojo Cards were primarily examined in this study, a possible study would be on the adoption process of the tourists when they have the Jojo Card. The knowledge extracted from this thesis can be used as a base for further studies in different contexts.

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