

LINE J

A CASE STUDY OF MOBILITIES IN MEDELLIN



RUNE RIISBERG FUNCK

AALBORG UNIVERSITY

MOBILITIES AND URBAN STUDIES

MARCH 02 2020

Abstract

This project is written as a Master Thesis at the Master's program, Mobilities and Urban Studies, at Aalborg University. It is written under the light of the sociological paradigm, the mobilities turn, which reflects the theoretical approach of the project. The overall research question of the projects asks: *'What is the experienced impact of metro-cable Line J along its route in Medellin?'* This question is investigated from five different angles, and the projects uses five different analytical tools in its investigation. In chapter one, are the travellers experience of 'other' materialities of Line J in analysed. The results of the investigations gave insights to how the people experience the lack of security because there are no seat-belts in Line J, how not enough fresh air were able to enter the metro-cable, and that people had a fear of falling down when travelling. The second analytical focus, critical points of contact on Line J, identified problems of mobility flow caused by: The low capacity on Line J, peak hours and waiting time for connecting transport. The third focus of the project investigated the motility of travellers with Line J. The key findings were that Line J had improved citizens motility by creating: Improved access in a neighbourhood that was topographically isolated, improved traveller access for people to their workplace and improved motility for travellers with disabilities. The fourth focus of investigation was Line J's effects on gentrification at the metro-cable stations. Line J has created higher house prices and higher prices for rent, which has forced some people to leave their apartments. The last analytical focus of the project focused on how Line J could be seen as a form of new military urbanism, conducted as a continued silent war after the aggressive military intervention, operation Orion, in 2002. The investigation showed that military installations were connected communicatively to the metro-cable stations and there were intense surveillance of the areas public space around and inside the metro-cables stations. The security of the areas was improved though, and the citizens associate Line J with a change into more peaceful times for the once violent neighbourhood in Medellin.

Acknowledgements

First of all I want to thank Ole B. Jensen, professor in Urban Theory at Aalborg University, for his supervision and support during the writing of my master thesis. I also want to thank Claus Lassen, at Aalborg University for his support during my master's degree in Mobilities and Urban Studies.

Secondly, I want to thank Angy Camacho for helping me conduct and translate interviews that were made along route of the metro-cable stations of Line J.

Thirdly, I want to thank all the experts that allowed me to interview them about the effects of metro-cable Line J in the community of the informal settlements in the Western part of Medellin. They have been a great help. I want to thank: Iván Sarmiento - PhD, senior researcher and expert in mobility at University Nacional de Colombia, Department of Civil Engineering. Emmanuel Ospina - researcher in sustainable mobility and urban transport at Universidad Eafit. Edwar Calderon – PhD, expert in displacement and gentrification and researcher at Urbam, Eafit University. Charles Ciro - civil engineer and expert in informal settlements at Organization Build Change. Lina Gonzales Camero - director of the commercial department at Real Estate Agent La Lonja de Propiedad, Medellin, Antioquia. Simone - social worker at La Cancha de Parialla in Juan XXIII. John - operator at Metro de Medellin in San Javier Metro-cable Station. Edwin - operator at Metro de Medellin in San Javier Metro-cable Station. Carlos - operator at Metro de Medellin in Juan XXIII metro-cable Station. Milton - security guard at Vallejuelos metro-cable station. Juan Miguel Guisao - security guard at Vallejuelos metro-cable station. Horacio - construction worker with experience in construction in informal areas.

Reading guide

This master thesis uses Harvard referencing system. The sources are written in the texts including the authors name and the year of publication. Direct quotes are referred to as author, year and page number. When interview that were made in Spanish were translate it is stated by (translated) at the end of the reference. Interviews that were made with travellers at the metro-cable station as part of this research are referred to as (name, age, occupation, location, translation). Interviews that are over 5 minutes long a quoted, the a time reference is stated in the quote. Interviews with experts are referred to as (name, expertise, organisation/title/workplace). In appendix, the interviews are divided in categories of experts, and travellers. And the interviews of travellers are divided into categories that show where they interviewed. The location of the interview and names are stated in the quotes when they are referred to, so it is easy to find them in appendix.

List of Figures

Figure 1: Line J (own picture).....	Error! Bookmark not defined.
Figure 2: Source own figure	10
Figure 3: Prices of tickets: Source: Metrodemedellin:2020 (Metrodemedellin.com).....	11
Figure 4: shows the metro-system close up of Line J and B. Source: Metro-de-medellin 2020 (Metrodemedellin.co)	12
Figure 5: own figure. Theoretical framework.....	20
Figure 6: own picture. show the metro station in San Javier.....	40
Figure 7; own picture. San javier metrocables.....	41
Figure 8: own picture. Juan XXIII	43
Figure 9. Own picture. La Aurora station	45
Figure 10: own picture. La Aurora station.....	47
Figure 11: Own figure: Funck: 2020	70
Figure 12: own picture. La Aurora station.....	74
Figure 13: Map Of metro-system. Source: Mapametro:2020.....	79
Figure 14: own picture: Funck 2020	92
Figure 15: Social stratification. Source Medellinguru:2020	103
Figure 16. Funck:2020. Own picture. Inside Line J.....	107
Figure 17: Comuna 13. Funck:2020	114
Figure 18: Own photo: Funck:2020	118
Figure 19. Funck:2020. Surveillance.	119
Figure 20: own. Funck:2020.....	122
Figure 21. Funck:2020.....	124
Figure 22. Funck:2020.....	126

List of Definitions

- CPC – Critical Point of Contact
- FARC – Fuerzas Armadas Revolucionarias de Colombia/Revolutionary Armed Forces of Colombia.

Table of Content

1.INTRODUCTION.....	8
1.1 LINE J - AS A PART OF THE MASS TRANSPORTATIONS SYSTEM IN VALLEY ABURRÁ.....	9
1.2 LINE J - SOCIAL URBANISM.....	11
1.3 MAPS AND LOCATION OF THE PROJECT	12
2. RESEARCH QUESTION	13
3.PHILOSOPHY OF SCIENCE	14
3.1 PHILOSOPHY OF SCIENCE	14
3.2 METHODOLOGY	15
3.2.1 Anthropological Field Study of Mobilities	15
3.2.2. Visual Ethnography.....	16
3.2.3 Semi-structured Qualitative interviews.....	16
3.2.4 Questionnaire	17
3.2.5 Ethical Reflections about collecting data.....	17
4. THEORY.....	18
4.1 INTRODUCTION	18
4.1 OF 'OTHER' MATERIALITIES.....	20
4.2 CRITICAL POINTS OF CONTACT (CPC).....	24
4.3 MOTILITY: MOBILITY AS A CAPITAL*	27
4.5 GENTRIFICATION/DISPLACEMENT.....	33
4.6 GRAHAM: CITIES UNDER SIEGE	34
5.INTRODUCTION TO THE ANALYSIS	37
6. ANALYSIS OF 'OTHER' MATERIALITIES.....	37
6.1 SAN JAVIER.....	38
6.2 ENTERING LINE J.....	41
6.3 JUAN XXIII.....	42
6.4 VALLEJUELOS	43
6.5 LA AURORA	45
6.6 EXPERIENCES OF 'OTHER* MATERIALITIES ON LINE J	47
6.6.1 Floor.....	48
6.6.2 Windows	49
6.6.3 View	52
6.6.4 Travelling with Line J	53
6.6.5 Colours.....	56
6.6.6 Seats.....	57
6.6.7 Comfort.....	59
6.6.8 Speed	60
6.6.9 The Space Inside Line J.....	62
6.6.10 Distances (To The Ground)	62
6.6.11 Safety	63
6.6.12 Sum up of Analysis of 'other' Materialities.....	65

7. CRITICAL POINTS OF CONTACT	68
7.1 A CPC QUESTIONNAIRE	68
7.2 LINE J - EXPERIENCES OF CPC'S	71
7.2.1 Maintenance – Creating CPC's	71
7.2.2 Peak Hours – Creating CPC's	72
7.2.3 Capacity Problems – Creating CPC's	77
7.2.4 Line J Connections – Creating CPC's	79
7.2.5 Weather Conditions Creates CPC's	82
7.2.6 Sum Up of CPC Analysis	83
8. MOTILITY	85
8.1 TOPOGRAPHY AND ACCESS	85
8.3 ACCESS TO THE WORKPLACE	87
8.4 ACCESS AND PRICES	89
8.5 DISABILITIES AND ACCESS	91
8.6 LINE J EFFECTS ON TOURISM	94
8.7 LINE J EFFECTS ON BUSINESS OPPORTUNITIES	96
8.9 SUM UP OF MOTILITY ANALYSIS	99
9. GENTRIFICATION	101
9.1 INCREASING HOUSE PRICES	101
9.3 A POTENTIAL RETURN ON CAPITAL INVESTMENT?	107
9.4 SUM UP OF ANALYSIS OF GENTRIFICATION	109
10. MILITARY URBANISM	110
10.1 FARC AND PARAMILITARY GROUPS IN COMUNA 13	111
10.2 OPERATION ORION	114
10.3 SURVEILLANCE	119
10.4 MILITARY PRESENCE	123
10.5 SECURITY	127
10.6 SUM UP OF NEW MILITARY URBANISM ANALYSIS	130
11. CONCLUSION	131
11.1 HOW ARE THE MATERIALITIES OF LINE J EXPERIENCED?	131
11.2 WHAT ARE THE CRITICAL POINTS OF CONTACT ON LINE J?	132
11.3 HOW HAS LINE-J INFLUENCED THE MOTILITY OF ACTORS ALONG THE METRO-CABLE STATIONS?	133
11.4 HAS LINE J CREATED GENTRIFICATION AT ITS FOUR STATIONS?	134
11.5 HOW COULD LINE J BE SEEN IN AS A FORM OF MILITARY URBANISM?	134
12. REFLECTIONS, CHALLENGES, USEFULNESS, AND FUTURE RESEARCH	135
9. BIBLIOGRAPHY	139
10. APPENDIX	140

1.Introduction

The project investigates the impact of the metro-cable Line J along its route in the Western part of Medellin, Colombia. The way this project is carried out, is by looking from five different perspective on how the people that are living in the informal settlements, where the metro-cable Line J Is implemented, have experienced this mobility system. The five different focuses and perspectives of the investigation are: The materialities of Line J, Critical Points of Contacts, Motility, Gentrification and as an element in the governments Military Urbanism. In this beginning chapter we start by introducing some basic knowledge about Line J. But before that, a I will explain how I ended up doing this study in Colombia.

Why travel to Colombia to study mobility?

In 2016, when I was studying to become a social worker at VIA University College in Aarhus, I had chosen to do my internship at the social organization Fundación Hogares Claret, located in the Western part of Medellin, Colombia. I arrived to Medellin, not knowing that this social organization, where I was supposed to work for five months, was located up the hills of the Aburrá Valley, behind the once infamous informal settlements in San Javier. I travelled to work everyday with these metro-cables and became curious about them. I started an investigation that would later result in writing my bachelor project about about what's been referred to as the Miracle of Medellin, the Medellin Model, or Social Urbanism. Medellin had been using urban planning and mobility as their main tool to create societal change in a city that was once know for being one of the most violent city's one the planet. To me it became interesting how physical space enables and restricts us in our everyday lives. How it gives us the power to act or how it restricts our actions. How it can encourage us to do things, or make us stop thinking about possible options in specific situations or in our lives in general. How the ideas we have about the physical space around us, can influence the ideas and understandings we have about ourselves, and our position in society, as well as it can influence the ideas other people have of us, and our social position. When I came home from Colombia in 2017 and I had

finished my bachelor degree, a friend of mine, an architect, saw the thesis I had written about social urbanism in Medellin, and told me about this master's degree called 'mobilities and urban studies' in Aalborg. Before this project presents the overall research question some basic information about the societal context of Line J, some technical information, as well as prices and metro-cable stations are presented so that the reader is ready to get to know a little bit more about the subject.

1.1 Line J - as a part of the Mass Transportations System in Valley Aburrá

March the 3rd 2008 the service of Metro-cable-Car Line-J was initiated. It was the second cable car that operated as an integrated part of the metro-system in Medellin and was intended to serve the population living in the Western parts of the city. (Metro-de-Medellin: 2019). The metro-cable was created as a part of the Mass Transportations System in Valley Aburrá, that was founded May 31 1979. The company was created to construct, operate and administrate mass transport systems and to generate development of the geographical Department of Antioquia, as well as to offer life quality for the citizens living in Medellin. Both the Department of Antioquia and the Municipality of Medellin participated equally in the creation of the project. The 30th of November 1995 the first route metro route – Line A – between El Poblado and Niquia was opened. Later the Line A metro-system expanded with 4 more stations. The metro was now going to the more Southern located end station than El Poblado, in La Estrella. Also the metro Line-B was constructed. Metro Line B later became the connection between this project's focus area – Line-J - and the metro's main route Line A. In 2004 the first metro-cable in Medellin was implemented. It was called Line-K, and was implemented in the North-eastern part of the city and became very popular. Later, in 2008, the Line-J was finally ready for operation. Several new metro-cable lines were later implemented to the integrated massive transport system since then. The total of the massive transport system has currently 76 stations that are divided in between 28 buses of the rapid transit systems (BRT),

9 trams, 11 metro-cables, and 27 trains. According to Metro-de-Medellin the Mass Transport System in Valle de Aburrá have gained international recognition for applying the principles of sustainable mobility, with clean energy, and by generating a great benefit socially for the city. The length of the Line-J route is 2.7 kilometres. It can carry up to 3000 passengers per hour in both directions. The total time of travelling one way with Line J is around 12 minutes. The route has 4 stations: San Javier, Juana XXIII, Vallejuelos and La Aurora Station. The only station of the metro-cable Line J that integrates the metro-cable with the rest of the Mass Transportation System of Medellin is the metro/metro-cable car station as San Javier. (Metro-de-Medellin: 2019).

Line J metro-cable stations are show underneath. The end station is La Aurora station. San Javier Station is where the metro-cable Line J Is connected with the rest of the city's metro-system through Line B.

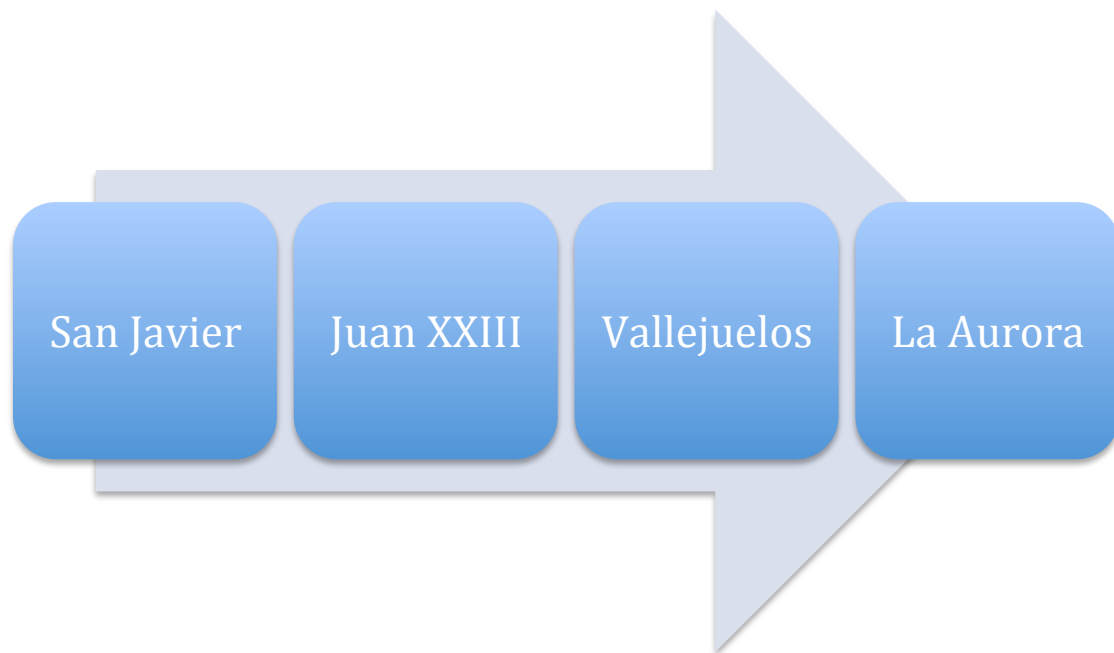


Figure 1: Source own figure

Tickets, Cards and Fares

There are different ways to pay for your travel with metro and metro-cable system in Medellin. A Civic card can be purchased at all the bigger metro stations gives you lower rates on trips and also security in the case you loose your Civic card. The card gives a particular discount when you use it for travelling with the integrated system of busses, metro, and metro-cable cars in Medellin. To buy such a card you need to bring an ID that accredits the person who is buying the Civic. (mapa-metro: 2019)

Below you see prices for different traveller profiles:

Frequent Profile	Price: 2000 COP (DK = 4.1kr)
Senior Adult Profile	Price: 1.910 COP (DK= 4kr)
Student Profile	Price: 1.040 COP (DK= 2kr)
PRM Profile	Price: 1.530 COP (DK= 3kr)
Carrier Profile	Price: 2.080 COP (DK= 4.2kr)

Figure 2: Prices of tickets: Source: Metrodemedellin:2020 (Metrodemedellin.com)

1.2 Line J - Social Urbanism

When the metro-cables were implemted as a part of the massive transport system in Medellin, they were a part of the idea (Social Urbanism (2002-2010) about refocusing larger public investments to the poorer areas of Medellin and paying back the city's historical debt to forgotten areas of the city. Social Urbanism were supposed to create better architecture that people could be proud of, increase the community's self-esteem and a feeling of belonging in the city. And the goal was, through this intervention, to create a profound social transformation. (Davila et al: 2013).

The urban upgrading around the Metro-cable Line-J in San Javier (2008) has, according to studies made in 2013, not had the same level of social impact on the surrounding society, as the first implemented metro-cable Line-K (2004) in Santo Domingo. (Davila et al: 2013). On three criteria the line L, could be said to not successfully compete with the first implemented metro-cable car, Line-K:

Improved opportunities, mobility of local residents, and urban integration with the city. (Davila: 2013).

It is argued, that barriers that separate citizens and residential neighbourhoods in different socio-economic strata (Colombia's official stratification system) are a threat in the process of eliminating the social inequality and creating a more social homogeneous social behaviour in the city, by the using of mobility. (Davila: 2013)

1.3 Maps and Location of the Project

This part of the introduction illustrates the overview of Medellin through maps of the city. And show how Line J are connected to the metro Line B and to the rest of the city's transport system.

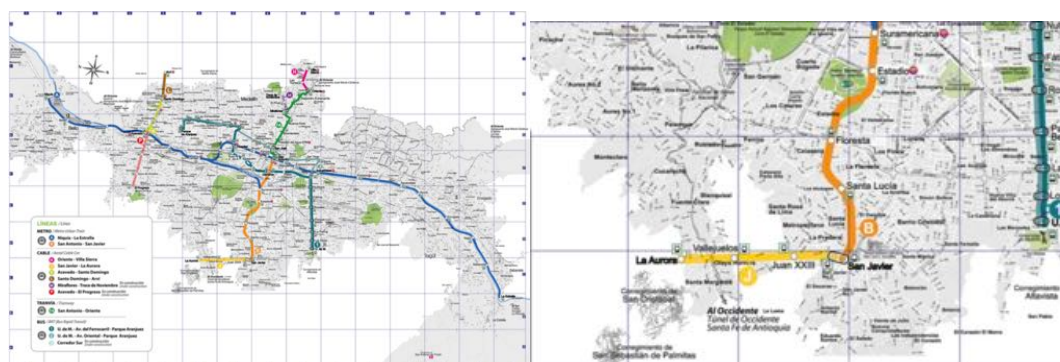


Figure 3: shows the metro-system close up of Line J and B. Source: Metro-de-medellin 2020 (Metrodemedellin.co)

2. Research Question

In the first chapter some background information to this project was described:
In this chapter we present the projects research question.

What is the experienced impact of metro-cable Line J along its route in Medellin?

Five sub-questions were developed to limit and specify the overall research question of *'how the metro-cable Line J has influenced the areas where it has been implemented'*. The five sub-questions are described underneath.

1. How are the materialities of Line J experienced?
2. What are the critical points of contact on Line J?
3. How has Line-J Influenced the motility of the travellers?
4. Has Line J created gentrification in the areas around the four metro-cable stations?
5. How could Line J be seen in as a form of military urbanism?

Each sub-question has its own chapter, where it is investigated by analysing collected data about the topic. It is investigated by applying theoretical literature that I found relevant to investigate each specific question. The literature for each sub-question is presented in the theoretical chapter. But first we are going to present the philosophical approach of this Master Thesis, and the methods that was used to investigate the question of *'how the metro-cable Line J has influenced the areas where it has been implemented'*.

3.Philosophy of Science

In the previous chapter, the research question and the sub-questions were presented to the reader. In this chapter, the philosophical approach of the investigation is described as well as the methodology that has been used to collect data in the field. We start by looking at the philosophical approach before we move on to the describing the methodology.

3.1 Philosophy of Science

This project use phenomenology as its philosophical approach. Phenomenology is about investigating the experiences of people's everyday life, by focusing on concrete, simple sensory experience. Husserl, the founder of phenomenology, questioned all scientific assumptions and said that the only thing that we could be really sure of was, that something is experienced. Therefore, we must look at the specific elements of these experiences: The object, the experiences of the object, and the consciousness and opinions of the object that we experiences. According to Husserl, no objects are viewed without an opinion or consciousness about it. And people, would always view objects in one way or another. (Lubcke: 1995). Phenomenology focuses on how the consciousness experiences objects by creating an opinion about it, which Husserl described as intentionality. What is central to in any kind of experience was, that it would always be pointed towards an object. Intentionality could therefore be interpreted as the relation between the experience of an object, and the inner conception of it. What points our intentionality towards a certain object is meaning. The intentionality between the experience and the object will always be mediated by meaning, independent of the object exists or not, meaning will ensure the intentionality. According to Husserl, meaning has a general character. This means that the ideas we have, and the way we express our ideas, we would often be able to find among other individuals as well. (Lubcke: 1995). In this project, we use phenomenology to investigate people's experiences of Line J. We try to look at the concrete and simple experience of people's everyday lives, and how mobility is experienced as part of this. The collected data that are analysed are full of certain ways that people view Line J, and full of experiences that are related to what they think is

meaningful or important when they travel with the metro-cable. The analysis of sensory experience of Line J is especially in focus in the first analytical chapter of this project, where traveller experiences of the metro-cables materialities, such as gravity, distances, view, and seats are investigated and analysed.

3.2 Methodology

In this part of the chapter the methodological approaches of the project are presented. First the anthropological field study as a method, then visual ethnography, semi-structured qualitative, quantitative methods, and then some ethical reflections about conducting interviews are described.

3.2.1 Anthropological Field Study of Mobilities

Field studies are normally connected with anthropological studies, but are not limited to only be used within this discipline. One of the common thoughts is that when a researcher is conducting field studies, they are influencing the object that is studied. One could say, that while you are investigating an object, it slowly takes shape. One important element of field study is, that it the researcher is located in the middle of what he or she is studying, which means that the researcher is investigating a unique and concrete situation, that is taken place in the landscape, right in front of the researcher. A field study is complex, and one has to limit the scope of investigation to a certain analytical object, which means that you have to identify a specific analytical view on the object that is investigate. (Brinkmann et al: 2010). While this study is a anthropological field study of mobilities. It is also a case study. When conducting case study, certain knowledge is produced that could be used in a certain way afterwards. In the social sciences it has not been possible to develop theory that were predictive and independent of context like in nature science. Therefore, the best thing that social sciences can offer is context-bound and concrete knowledge. (Brinkmann et al. 2010). Case studies are suitable for both development and testing of hypotheses in the social sciences, and works well to investigate atypical or extreme cases, because they can help to capture basic mechanisms of the

observed phenomena. They can capture, they deeper reasons for certain actions, or deeper understandings behind actions in society. In contrast to quantitative methods, qualitative case studies could create insights to why things happen and what the consequences are. (Brinkmann et al. 2010).

3.2.2. Visual Ethnography

Visual ethnography was used throughout the whole analysis, but was especially useful in the first part of the analysis, which focuses on materialities. By using visual ethnography, the project has been able to show and document the physical environment of Line J and the physical environment in the areas around the metro-cable stations. Visual ethnography is useful to document and collect data that can provide the reader with a visual impression of the material world of Line J and the physical and spatial environment around it. Visual ethnography works well combined with other forms of analysed data that does not have the same visual quality to describe colours, situations, actions and so forth.

3.2.3 Semi-structured Qualitative interviews

Semi-structured qualitative interviews were used to collect data about the materialities of Line J, critical points of contact on Line J, the motility of Line J, gentrification and the military urbanism in the areas around Line J. The semi-structured interviews were conducted by not not strictly following the developed interview guide, even though, the focuses of the guide, was where the interviews took point of departure. If something interesting came up, something that I had not thought of yet, or something the person that was interviewed thought was relevant and meaningful for the interview about Line J, I listened. 12 Qualitative interviews have been conducted experts and professionals from Medellin with knowledge and experience about Line J and the effects of the implementation in San Javier, Juan XXIII, Vallejuelos and La Aurora metro-cable stations. 45 qualitative interviews were made with citizens living in the areas near to the station and with travellers inside the metro-cable and outside the metro-cable stations. Underneath, the names, professions, and areas of expertise of the experts that were interviewed are described.

- Iván Sarmiento. PhD, Senior researcher and expert in mobility at Universidad Nacional de Colombia, Department of Civil Engineering
- Emmanuel Ospina. Researcher in Sustainable Mobility and Urban transport at Universidad Eafit, and working at the Mobility Office in Medellin
- Edwar Calederon. Postdoctoral researcher at Urbam, Eafit University. Expert in Displacement and Gentrification
- Charles Ciro. Civil Engineer at Organization Build Change. Expert in Informal Settlements Medellin.
- Lina Gonzales Camero. Director of the Commercial Department at Real Estate Agent La Lonja de Propiedad, Medellin – Antioquia
- Simone. Social Worker at La Cancha de Parialla in Juan XXIII
- John. Operator at Metro de Medellin. San Javier Metro-cable Station
- Edwin. Operator at Metro de Medellin: San Javier Metro-cable Station
- Carlos. Operator at Metro de Medellin. Juan XXIII metro-cable Station
- Milton. Security Guard. Vallejuelos Metrocable Station.
- Juan Miguel Guisao. Security guard. Vallejuelos Metrocable Station.
- Horacio. Construction Worker in Informal Areas. Juan XXIII metro-cable Station.

3.2.4 Questionnaire

In the second part of the analysis, where the critical points of contact of Line J are in focus, the project has used a questionnaires to collect information about the to problems investigated: What creates critical point of contact when travelling with Line J, and where is the critical point of contact on the Line J route. The questionnaire.

3.2.5 Ethical Reflections about collecting data

When the interviews were collected, I made sure to ask how the people that were interviewed felt about the interview. I made sure to tell them exactly what

the interview was about, and what it would be used for. Also, I did my best, to put myself in their position and to not talk about things that seemed to be uncomfortable for them. Some of the people I was doing interviews with, were people that are living in the poorest areas of Medellin, and could be said to one of the most vulnerable groups in this society. Their experiences of the previous military interventions in the area, seems to be difficult for them to talk about, which meant, that I in some cases, had to change the subject of the interviews. But mostly, people told me that they felt good about talking about their neighbourhood and the metro-cables.

4. Theory

4.1 Introduction

This project is written under the light of the sociological paradigm called the mobilities turn. The mobilities turn could be described as sociology that is concerned with diverse mobilities of people, objects, information, images, and wastes. It focuses on the social consequences of the complex interdependencies between these mobilities. (Urry: 2010). It is concerned with the flow of people within and beyond territories, and how these flows are related to work, desires, leisure, housing, religion, and crime. Furthermore, mobilities should be considered horizontal rather than vertical, which is common within for example the literature of social mobility. (Urry: 2000). In this project, we investigate the mobilities of Line J and the impact of the metro-cables in Medellin, by looking at materialities, critical points of contact, motility, gentrification, and military urbanism. A theoretical framework was constructed to analyse these five focuses that are now represented. The first part of the projects analysis focuses on analysing the materialities of Line-J. The article, *Of 'Other' Materialities: why (mobilities) design is central to the future of mobilities research*, written by Ole B. Jensen (2016), is used to analyse the materiliaties of Line J. This can help us get a better understanding of the material space that is analysed as well as how it is experienced by the people that travels with Line J. The second analytical tool

that is used in the article written by Ole B. Jensen and Nicola Morelli in 2011 called *Critical Points of Contact – exploring networked relations in urban mobility and service design*. This article is used as an analytical tool to investigate where the mobility flow of Line J is critical, and how these critical mobility situations are experienced by travellers that use the network on their daily journeys. Our third analytical tool, is the article written by Vincent Kaufmann, Manfred Max Bergman and Dominique Joye called *Motility: Mobility as a Capital**. This analytical tool is used to analyse the motility of travellers and potential travellers in the areas around the metro-cable station of Line J. The fourth analytical tool that is presented is the concepts of *gentrification* taken from a research article written by Castree, N., Kitchin, R., & Rogers, A. (2013). This tool is used to analyze how Line J has caused the house prices and rent near to its stations to increase, and how this has led to people without economical capital at their disposal to pay the increased prices, being forced to leave the area. Finally, the fifth analytical tool of this project is the book *Cities Under Siege* (2010). The theoretical concept of this book allows us to view how the implementation of modern infrastructure in public spaces can work as a tool of silent warfare, where the civil society is monitored, and where public spaces are becoming a space of battle. Underneath, a theoretical diagram illustrates the five analytical perspectives.

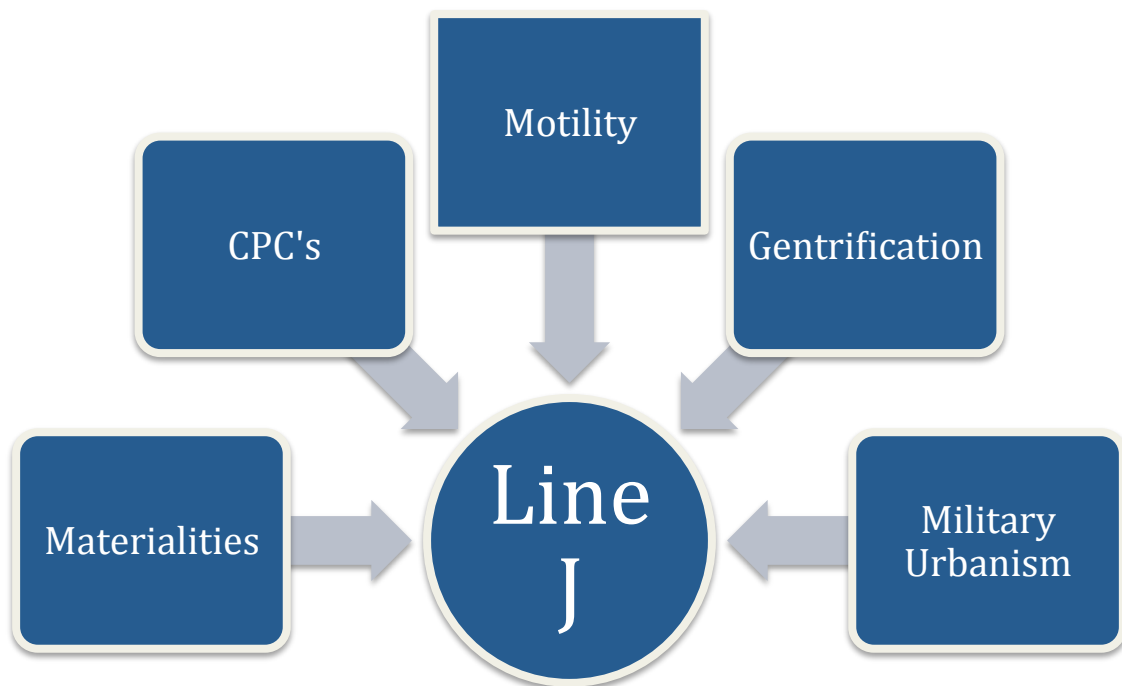


Figure 4: own figure. Theoretical framework

4.1 Of 'Other' Materialities

The first analytical tool described in the project used to investigate Line J puts focus on the metrocables materialities. I use the article “*Of other materialities: why (mobilities) design is central to the future of mobilities research*” by Ole B. Jensen written in 2016. In the article Jensen argues that design is central in mobilities research (Jensen: 2016). He re-articulates the notion of materialities and says that analysing materials should be an important part of the future mobilities research, as a way to put focus on the intersection between design/architecture and situational mobilities. (Jensen: 2016). The vocabulary developed within architecture and design could inspire researchers of mobilities that are interested in investigating particular mobile situations and how these situations are made possible. He argues that we should look at what he calls “other” materialities, which for example could be volumes, voids, or surfaces, but argues, that this should be done in what Jensen calls “other” ways. He wants

us to be more sensitive in our analysis of materials, spaces and sensations, and that we should use this sensitivity in the analysis of situational mobilities design. That mobilities researchers must engage with the design field to expand the understanding and vocabulary of everyday life mobilities and their spaces, a vocabulary, that connects architectural and sociological realms. (Jensen:2016). An analysis of the materialities in the mobilities research combined with the complexities of movement, the increase in volumes of movement, and the repercussions of this mobile world is the main issue of the articles theoretical frame. It shares the agenda within the ‘mobilities turn’ of a situational and pragmatic approach to mobilities design, and argues that a deeper focus on materialities could help expand the understanding of material qualities and properties in mobilities research. (Jensen:2016).

According to Jensen (Jensen:2016) there is a need of attention to materialities that focuses on the concrete materialities instead of abstract concepts, which he argues, is a way to avoid the issues of how time and history could potentially dominate the discourses of societal transformation. (Jensen:2016). Concepts such as structures, spaces, surfaces, volumes and voids are parts of what could be used in a sensitive analysis of ‘other’ materialities. Also, terms such as distance, proximity, scale, movement, symmetry, vertically and colour could be used in such analysis. (Jensen:2016).

Jensen writes that it is only possible through a “*contextual understanding of the “body in place”*” (Jensen:2016) to comprehend the complexity of materials that shapes the surrounding environments of everyday mobilities. (Jensen:2016). Also he argues that, even though the multi-sensorial human perception is central in the meeting with ‘other’ materialities, one must stay clear of a human centric framing of the analytical themes. (Jensen:2016).

Mobilities Design and its Affordance

Jensen (Jensen: 2010) writes that mobile situations should be investigated more in detail, and suggests that a ‘material turn’ should be developed through a critique of the notion ‘affordance’. The relevance on the mobilities design is

found in the concern of: *“What design decisions and interventions afford, enable, or prevent concrete mobile situations”* (Jensen: 2016). (Jensen: 2016). To explain the word ‘affordance’ Jensen (Jensen: 2016) writes that *“In the book ‘The Ecological Approach to Visual Perception’ Gibson (1986: 2015) proposes that, ‘The affordance of the environment are what it offers the animal, what it provides or furnishes, either for good or ill’”* (Jensen: 2016). Jensen adds to this understanding an ‘action based’ approach to this definition, which means, that we must focus on the affordance of mobilities where the action is, since mobilities are not uniform processes in the minds of people, but something that is actually going, unfolded as dynamics between the physical environment and the human body. (Jensen:2016). The materialities are important in the mobilities design because it shapes the spaces, and the affordances that makes it possible being mobile (Jensen:2016).

Of ‘Other’ Materialities

The article connects the mobilities turn in general with mobilities design and focus on materialities. (Jensen:2016). This is called a ‘turn to the materialities’ by some (Jensen:2016). In the material turn there are links to both pragmatist thinkers and phenomenologist. The phenomenologist thinker Heidegger writes about the notion of ‘things’ as relational engagements and ‘openings’ to the world while the pragmatist focus on the concrete dimensions of human life, the particular and the situated. (Jensen:2016). The connection between pragmatism and materialities is found in the specific affordance that is developed through designs and interventions, and, through the idea of materials not being passives. (Jensen:2016).

Jensen (Jensen:2016) argues that the sensitivity and multi-sensorial offer its potentials in the investigation of the mobilities design, because materialities should be understood as permeable instead of external, when humans are enrolled into complex assemblages of designed systems, sites and infrastructure, and this deep relationship between humans and materials he refers to in this context as ‘osmosis’. (Jensen:2016).

Material Pragmatism in Mobilities Research

The material turn connects phenomenological notions of ‘things’ as related engagements, but also understood as ‘openings’ to the world (Jensen:2016). While there are also connections with the classical pragmatism that focuses on: what is situated, the particular, and the concrete dimension of human life. (Jensen:2016). To explain shortly what ‘other’ materialiteis is, it is possible to use concepts as ‘*the differnet sensual sensitivity to surfaces, structures, volumes, surfaces and space*’ illustrates Jense (Jensen:2016).

He explains that the ‘lines of thought’ in the article are described as ‘material pragmatism’. The idea is to take point of departure in concrete mobile situations, to investigate what is actually happening, connected to the pragmatic question: ‘What makes things happen?’, that seeks avoid including beliefs, hopes, and preconceptions, in order under understand how specific materialities afford mobile situations. (Jensen:2016).

Underneath the terminology suggested by Jensen is shown. The analytical catagoties are inspired but re-modeled a bit in the actual analysis.

- Voids
- Volumes
- Surfaces
- Spaces
- Structures
- Proximity
- Distance
- Movement
- Scale
- Vertically symmetry
- Colour

4.2 Critical Points of Contact (CPC)

This project uses the article "Critical Points of Contact - Exploring networked relations in urban mobility and service design", written by Ole B. Jensen and Nicola Morelli, as a theoretical perspective in the investigation of Line J.

CPC explores the potentials of strategic sites, nodes, where different infrastructure systems meet, such as communications, friction or traffic. A Critical Points of Contact are the node or site where networks that are connected becomes a concern or an issue, and where the system show itself, or are more noticeable, for example if fallouts, breakdowns or failures happens. (Jensen et al. 2011). Though, it is worth mentioning that a system does not have to break down to be relevant to put focus on. The idea is to 'cultivate the gaze' on the critical points of contact, and by doing so, achieve a more profound understanding of more efficient ways of mediating different network systems, improving interaction opportunities, and get a better understanding of the potentials of making better designs. (Jensen et al. 2011). The notion of CPC and the ideas behind it, is to find the 'hot spots' that are critical, in the way that they are important, or makes a difference either for interacting users, or for the interacting systems. (Jensen et al. 2011).

A lexicon of CPC

The article describes three central concepts that defines a CPC; Interface, Node, and Network. The interface is the point where the systems or subjects meet and influence each other. The Node is the point where two systems or lines cross or meet each other, formulated as a network node. And, network in this case, means a complicated system of nerves, tubes, line, or roads which meets each other and are connected. (Jensen et al. 2011).

The network points of most importance are the ones that could be called 'critical'. But what is critical is not a "*fixed ontological property*" (Jensen et al. 2011), which means that it depends of the analytical focus that of a project what

is perceived as critical. When investigating social exclusion and public transportation it makes sense to look at the ticket prices as something critical, but also, how elderly might struggle to travel with modern technology and increasingly complex mobility systems. (Jensen et al. 2011). Besides that, there could be two perspectives or point of views of a CPC analysis: One, that focuses on the system, and another one, that focuses on the individual user of the system, which also means, that the CPC that is payed attention to, becomes critical depending on which yardstick or value that is used in the analysis of the CPC, such as: Volume, risk, aqual access, economic output, density, technical effeciency, friction or strategic impotence. These parameters might influence the the CPC's ability to support inclusion, exclusion, access or in-access. Such systems could be called socio-technical systems. (Jensen et al. 2011).

CPC in Urban Mobility

CPC's as a socio-technical systems might involve human-human interaction, but also, and as important as human-human interaction, assemblages of human-non-human interactions within material layers of connected or disconnected networks at multiple scales, as well as semiotics, or sign-processes. Related to urban theory and mobility studies it is possible to look at CPC's as sites of friction, speed differentials or modal shift. It could be a site of interaction or physical friction. (Jensen et al. 2011). CPC's are not only related to issues such nice designs and technical effeciency, but also issues such as social justice, social exclusion, accessibility and power, which are things that lies within a conceptual discussion of CPC's. (Jensen et al. 2011). When using CPC' in mobilities research it is based on the investigation of flow within networks in socio-technical systems that goes beyond the traditional notion of urban scale. (Jensen et al. 2011).

Making CPC's operational

Empirical application of the concept is needed to understand, challenge or re-design the the CPC as an analytical tool. Jensen (2016) shows how he has developed an analytical frame through field studies of the Copenhagen metrosystem. This framing seeks to explore the actual conditions of mobile life in

the socie-technical system, the metro of Copenhagen. In this analytical frame that he has developed he focuses on three things. (Jensen et al. 2011).

1. Technical perspective: Which is trains, ticket systems, platforms, functionality, the relation to wider city networks and urban logistics.
2. Social perspective: Which is user groups, metro-experience, the feeling of being 'moved' socially and individually, public domains, and the ways of experiencing power in relation to the CPC.
3. Aesthetic perspective: Which means the form, art, the design codes, commercials, symbols and signage.

Using the notion of CPC as framework means to look for connections between systems while adding a analytical layer to the framing. (Jensen et al. 2011). The article presents 5 questions that have been developed earlier to make CPC operational.

1. Identify a site or two or more intersection systems performing as CPC
2. Map technical social and aesthetic dimensions of the identified CPC
3. Make an analytical judgement of CPC in terms of chosen point of view/research
4. Identify a potential for social and economical value that has not been fulfilled by the CPC (e.g. a service not catered for, a user group not included etc.)
5. Make a first tentative proposal for a re-design catering for the identified potential

Jensen points out two crucial issues in the CPC. First, the 'point of view' controls how the we engage with the CPC. This means that we must focus more explicitly on certain issues when for example functionality is our mains study of a CPC to be able to scope possible suggestions of re-design. (Jensen et al. 2011).

Secondly, a potential underuse of the CPC's must be prioritized in the analysis to actually creating valuable research that could be used in a later potential re-design, as part of creative strategy within the analysis. (Jensen et al. 2011).

Urban Mobility Spaces and Critical Points of Contact

A metrostation, depending on the point of view, contains several CPC's since it connects multiple flows and networks. A metrostation itself could be seen as a CPC, where the main idea is to assemble and re-assemble elements of the CPC, in this case the metrostation. (Jensen et al. 2011).

Concluding remarks of the article

The article focuses on the usefulness of CPC as a theoretical framework to help understand the complexity of contemporary mobility networks and the organization of social agents everyday life experiences. The framework offers a way, to better understand how systems connect, are in contact, how they interact, and how they produce services, infrastructure and solutions that are useful. (Jensen et al. 2011). The framework allows for different perspectives or points of view, such as the passenger perspective or the perspective of a infrastructure system.

4.3 Motility: Mobility as a Capital*

The third theoretical concept that this project uses in its investigation of Line J is written as a contribution to the studies within the sociological turn - mobilities turn - and is explained in the article: Motility: mobility as a capital*. The article is written by Vincent Kaufmann, Manfred Max Bergman and Dominique Joye in 2004.

The intention of the article is to explore mobility in relation to social structures in modern societies. It focuses on the relation between social and spatial mobility and argues that the potential capacity to displace entities, goods, information or people are interdependent with the dynamics of social structures. (Kaufmann et al: 2004). The article describes a theoretical concept of how ecological and spatial arrangements of economic, cultural and social assets correspond to each other.

The idea of this theory is to expand the connections between urbanization, class and power. The theoretical concept of the article is written as a contribution to the study of mobility as a phenomenon that are both social and geographic. The theoretical concept works within the ideas of synergies between social and spatial mobility. (Kaufmann et al: 2004).

Time-space compression and social fluidity

Spatial mobility refers to geographic displacement, which means the movement of entities from one place to another through space and time .(Kaufmann et al: 2004). These entities can be abstract such as norms, ideas, information, or concrete such as machinery and people. Through the journey of displacement the entities could experience a change of status, value or importance, and also, the end geographical area of departure as well as the end destination of the entity could change. These changes in mobility patterns can create fundamental changes in society.

Social mobility

Social mobility is when transformation occurs in the distribution of resources within a given social structure or network. This can be exemplified in changes of social positions of groups, families or individuals. (Kaufmann et al: 2004). These changes could happen as inter-generational mobility (changes of inheritance from parent to children) , or intra-generational mobility (changes of individuals social position over a period of time), and, when these changes happen collectively it could be described as social change. (Kaufmann et al: 2004). Historically, these processes have been measured by looking at the indicators of occupational transitions among individuals, or within industrial sectors. The idea of social mobility presupposes that social stratification exists, and that there is an unequal distribution of resources, position or status. (Kaufmann et al: 2004). Kaufmann 2004 writes that *"the normative direction of the often ideologically oriented works tends to regard social fluidity (or flux) positively in that flux is portrayed as a catalyst of the advancement of social justice in terms of more egalitarian resource distributions and reward structures"* (Kaufmann et al: 2004). This description is used in this project as the normative foundation for

investigating the societal changes of Line J. The societal changes would not be interesting or important if the resource distribution in society of Medellín were fair.

Kaufmann (Kaufmann et al. 2004) writes that some researchers only focus on the consistency of occupational structures over time, in their research about social mobility, but that others focus on explore the societal changes, dynamics and variability. This project focuses more on the experience of societal changes due to the Line J, the and the experience of the societal change and dynamics of this technology. Whether social structures exist, or changes, depends on one's theoretical habitus, and the strategic selection, or presentation of empirical evidence. The article asks the questions: *"Which contexts condition societal fluidifications and in what way?; What are the dynamics of the conditional impact of the space-time compressions on the particular society or region?"* (Kaufmann et al: 2004). Both social and spatial mobility investigate the social transformation, and the consequences of movement.

Motility

Motility focuses on movement in space and time as well as the interactions between actors, structures, and context. (Kaufmann et al: 2004). The societal processes on a macro-scale are impossible to understand if we do not investigate the reasons, constraints, and effects of spatial mobility (Kaufmann et al: 2004). The study of the potential movement will show aspects of how people are being able, or not being able to move, limits or increase their possibilities to act, as well as it influences the larger societal consequences of societal and spatial mobility. (Kaufmann et al: 2004).

Motility is a theoretical concept that includes both social and spatial mobility, and argues that it represents a more comprehensive way of understanding mobility. This way of understanding mobility does not only focus on actual and past mobility and is called 'motility'. (Kaufmann et al: 2004). This theoretical concept is defined as *"The capacity of entities (e.g. goods information or persons) to be mobile in social and geographic space, or as the way in which entities access*

and appropriate the capacity for socio-spatial mobility according to their circumstances” (Kaufmann et al: 2004). Motility is a incorporation of cultural and structural dimensions of actions and movement, and should be understood as both the potential and actual capacity for spatio-social mobility, which could be realized in different ways, and have various consequences depending on cultural and social contexts. An analysis of motility contains three focuses on interdependent elements in mobility; Access, competence and appropriation. Access to different forms of mobility, competences of how to make use of the mobility, and finally, appropriation of a certain choice, which could include not to act, and not to be mobile. (Kaufmann et al: 2004).

Kaufmann describes these three theoretical key-focuses of an motility analysis like this:

- *“Access refers to the range of possible mobilities according to place, time, and other contextual constraints, and may be influenced by networks and dynamics within territories. Access is constrained by options and conditions. The options refer to the entire range of means of transportation and communication available, and the entire range of services and equipment accessible at a given time. The conditions refer to the accessibility of the options in terms of location-specific cost, logistics and other constraints. Obviously, access depends on the spatial distribution of the population and infrastructure (e.g. towns and cities provide a different range of choices of goods and services), sedimentation of spatial policies (e.g. transportation and accessibility), and socio-economic position (e.g. purchasing power, position in a hierarchy or social network).*
- *Competence includes skills and abilities that may directly or indirectly relate to access and appropriation. Three aspects are central to the competence component of motility: physical ability, e.g. the ability to transfer an entity from one place to another within given constraints; acquired skills relating to rules and regulations of movement, e.g. licenses, permits, specific knowledge of the terrain or codes; and organizational skills, e.g. planning and synchronizing activities including the acquisition of*

information, abilities and skills. Competence is multifaceted and interdependent with access and appropriation.

- *Appropriation refers to how agents (including individuals, groups, networks, or institutions) interpret and act upon perceived or real access and skills. Appropriation is shaped by needs, plans, aspirations and understandings of agents, and it relates to strategies, motives, values and habits. Appropriation describes how agents consider, deem appropriate, and select specific options. It is also the means by which skills and decisions are evaluated. (Kaufmann et al: 2004)."*

Kaufmann also writes that these elements are fundamentally connected to social, cultural, economic and political processes.

Motility as a Capital

Kaufmann writes that socially desirable resources such as education, health, safety and stable work, status, power, social integration among other things, is said by some, to be assets that could be exchanged or bought for financial capital, which is an argument against using the term 'capital' to describe assets other than economical ones. And for example are, health and education, are not reversible assets like financial capital. (Kaufmann et al: 2004).

Epistemologically, financial capital is also easier to theorize, operationalize, and measure, than other constructions in social sciences, like social, human or cultural capital. (Kaufmann et al: 2004). But arguments against these thoughts are, that it is very difficult to assess the actual value of economical income that comes from work, assets, and other possessions, because of geographical weighting caused by spatial variations of prices and costs. (Kaufmann et al: 2004).

Empirical research

The theoretical concept of motility allows for a holistic and explanatory model in relation to social inequality and social stratification. Empirical research within social inequality and stratification could focus on how access, competence and

appropriation are formed by the conditions of travelling in between different spaces, which could be created by technological innovation and its ability to reach other areas, the spatial and geopolitical limitations, and other possible constraints. (Kaufmann et al: 2004). This kind of research could contribute in different ways depending on the level of abstraction.

Motility on a Micro-level

On a micro-level of motility research, access and competence could be studied by looking at the options and conditions of displacement possibilities of individuals and how it is related to resource exchange, for example, how individuals exchange mobility capital, or motility, into resources such as status, money, education, information, time or other assets. Some elements should be looked upon differently, including the actors skills and capacities, that either indirectly or directly have an impact on the social or physical mobility; Knowledge or the recognition for the importance of knowledge that is indirectly or directly related to spatial and social mobility; The access to networks or tools that are relevant to facilitate mobility; And the recognition of the outcome and value of within specific local and situational contexts. (Kaufmann et al: 2004).

Motility, on a micro-level, which could be described as actual and potential spatio-social mobility, could be studied by looking at different family members of a household. The focus could be on the mobility related activities of each household member, such as going to school, work, household-related activities and leisure, and how each member move in between these spaces to perform these activities. (Kaufmann et al: 2004). Studying the motility of individuals could highlight the activities of actors across time and space, which could be related to shifts in their social positions. The different constraints and behaviours could be focused on, when individuals try to negotiate their mobility potential, spatially and socially, within the specific contexts. (Kaufmann et al: 2004).

Motility on a Meso-level

On a meso-level, motility could be investigated in relation to transport in between areas of space segregation. Multi-occupationality and multi-

residentiality, or how to bridge large distances in between place of residence and occupation, which is seen more often among specific societal groups of a population could be investigated. (Kaufmann et al: 2004). The dependence of cars in sub-urban ghettoization could be one of the consequence of these large distances, which could have negative influence on the social differentiation of a population. (Kaufmann et al: 2004).

4.5 Gentrification/Displacement

In the projects analytical framework the terms displacement and gentrification is incorporated. This could be seen as an extension of the investigation made, when using the the theoretical concept of motility. If the potential mobility of people that lives around the Line J are improved, displacement and gentrification around the stations of Line J could be seen as a negative result of the improved potential mobility in the areas.. The rationality behind this incorporation of displacement into the analytical framework is, that when mobility capital, or the potential mobility of people living in a certain area is improved, the value of houses, rent, prices etc. might also increase, which could cause displacement or gentrification. Displacement is defined by the Oxford dictionary as:

"The act of forcing somebody/something away from their home or position (Oxford Dictionary:2020).

The term gentrification could also be used to understand some of the negative proceses that could have happened as a result of improved mobility options for the people living around the stations. Oxford describes the term gentrification as:

"The process of improving an area of a town or city so that it attracts people of a higher social class than before". (Oxford Dictionary:2020).

Line J could definitely be viewed as a huge improvement of the area, which could have resulted in attracting people from higher social classes both temporarily

and more permanent. This could create gentrification in the area, where houses or areas around Line J metro cable stations are improved. Therefore, it makes sense to investigate gentrification, as a possible negative influence of the potential motility that Line J could have created.

Broader Definition of Gentrification

Gentrification means economic and demographic changes that results in reinvestments in urban areas. When this happens, the social character changes in a neighbourhood which affects public spaces, restaurants and shops.

Originally gentrification was identified by Ruth Glass in 1964, when occupation, renovation and upgrading of working class dwellings happened in inner city neighbourhoods in London. Later, Neil Smith developed a broader definition of gentrification that also includes the focus on return in capital investment. The potential return of capital investment in urban areas could result in new buildings, changes in planning tax codes, new forms of consumption and wider cultural shifts. (ResearchGuides: 2020).

4.6 Graham: Cities Under Siege

Stephen Graham (2010) writes about a new military urbanism in his book *Cities Under Siege*. This thesis uses the perspective from the book to illuminate how surveillance and militarization of the area where Line J were implemented in 2008 has been a part of the Colombian government's approach in the effort to pacify and take back control of a suburban area that once was completely controlled by FARC, criminal organizations, and right wing paramilitary groups.

Introduction

Graham argues that a "*massive global proliferation of deeply technophilic state surveillance (Graham: 2010)*" are a signal of a militarization of civil society, and the extension of military ideas of tracking, targeting and identification into the spaces where the population circulates in their everyday life. (Graham: 2010). In a globalized world of urbanization, these ideas represent the attempt of

implementing high-tech military rationality into governance of urban civil society. (Graham: 2010) The military and security doctrine that are influencing the security systems of western societies focuses on identifying insurgents and terrorists, and other threats that comes from the chaotic urban life. The doctrine stresses the importance of identifying people that could be considered threats before their deadly potential are realized, whether this is happening in airports, transportation tubes, or in the streets of cities. (Graham: 2010).

The New Military Urbanism

The mix between civilian application of advanced and modern military technology, surveillance and control of people's everyday life in Western societies, and the prosecutions of aggressive colonial resource wars is the main trends of what characterizes the New Military Urbanism. (Graham: 2010). The peaceful western settings of urban life are, of course very different from actual war-zones, but the advanced technology that are used to perform this kind of violence comes from a set of the same ideas. (Graham: 2010). Basically, this New Military Urbanism means that both private and communal spaces, modern infrastructure, and the civil population are seen as possible targets and threats. An example of this, is seen in the way that the metaphorical use of the word "war", dominates in the descriptions of the boundless condition of urban societies. (Graham: 2010). A war that is fought against crimes, drugs, terror, and against insecurity. A stealthy militarization is incorporated within a wide range of policy debates, urban landscapes, and circuits of urban infrastructure. But this is also seen in the popular and urban culture. The discussion of security leads to a creeping militarization that are diffused into every walk of life. Predominantly, the human mankind has become urban species for the first time in 150.000 years, and in the meantime, this insidious militarization of urban life has happened. A notable range of cultural, social and political circuits are currently colonized by this new military urbanism. (Graham: 2010).

Urbanizing Security

According to Graham (Graham: 2010) the systems that weave cities together are starting to dominate discussions of security, geopolitics and war.

(Graham:2010). Within the new military doctrine, where asymmetric war is called 'low-intensity conflict', 'long war', 'netwar' or the 'fourth-generation war', and everyday spaces and urban circulations are suddenly the main 'battle-space', both abroad and within borders. The military doctrine is being re-imagined in a way that blurs the differences between war and peace, and the differences between local, national and global operations. (Graham: 2010). Also, the centres of state power are increasingly spending more resources on separating bodies that are looked upon as threatening, from those who are seen as valuable, within urban infrastructures and spaces of everyday life. These security politics are based on profiling of individuals, behaviors, places, associations and groups, instead of legal systems, human rights based on universal citizenship. (Graham: 2010).

Surveillant economy

Graham (Graham: 2010) writes that it is important to be aware that these ideas about a new military political economy, that colonize urban thinking and practice by the ideas of militarized 'security', is based on a complex range of sources. (Graham: 2010). These militarized ideas come from research labs and corporate universities who sell security solutions as 'silver bullets' to solve complex social problems. They come from a complex mass of security and military thinkers who argue that political violence and war is centred within urban life and everyday spaces of it. The results of such thinking and practice are, that public security will infect all aspects of social and public life. (Graham: 2010).

Urban Infrastructure, Urban War

The reliance of dense webs of infrastructure is the very nature of the modern city. The city's anonymity and density, and its dependence on imported food, water and energy makes it vulnerable to violence committed against it and through it. Therefore, the city is conceived, as a main place for war, by state and non-state fighters. A lot of examples from recent times show how the power of non-state actors are gained through appropriating the technical infrastructure that is needed to uphold a modern and globalized urban life, so that they can

project and amplify their power and the impact of their political violence.
(Graham: 2010)

5.Introduction to the Analysis

In chapter 4, we presented the theoretical framework that will be used in the project to investigate the five sub-question that together represent the overall research question: 'What is the experienced impact of metro-cable Line J along its route in Medellin?' As mentioned this is investigated by looking at five different perspectives that are described below. The order of the analysis is conducted in the same order as they are written below.

1. How are the materialities of Line J experienced?
2. What are the critical points of contact on Line J?
3. How has Line-J Influenced the motility of the travellers?
4. Has Line J created gentrification in the areas around the four metro-cable stations?
5. How could Line J be seen in as a form of military urbanism?

6. Analysis of 'other' Materialities

The first part of the projects analysis focuses on the materialities of Line-J. The analysis is divided into two parts. The first analytical part is a phenomenological place description made through observations and registrations of how the materialities are experienced when travelling with Line J. Jensen(2016) writes that a detailed and sensitive description of materialities should happen through a contextual and situational analysis through a 'body in place' and multi-sensorial method. The description includes my own experience of travelling with Line J and how i have experienced the materials, sounds, atmospheres, and spaces alongside a travel from the beginning of the route at San Javier Station to the end station of Line J, La Aurora. The materialities inside the metrocable is

also described and visual ethnography is used to provide the reader with information about the visuals that otherwise would be difficult to describe in words. The first analytical part is divided into these topics: San Javier Station, Entering Line J, Juan XXIII, Vallejuelos and La Aurora Station. The second part of the analysis focuses on the data collected through qualitative interviews that were made inside the Metrcable Line J and at the metrostations along the route. The qualitative interviews were focusing on how the travellers of Line J were experiencing the materialities of Line J and is divided into topics such as; Floor, windows, view, gravity, colours, seats, comfort, speed, space inside Line J, distances, noise and safety.

This analytical chapter has used the ideas from the article 'Of 'Other' Materialities' written by Ole B. Jensen (2016) to analyse the materials. The idea of such analysis is to provide the reader with a more detailed and in-depth description of the physical settings of what is the center of this investigation - The Line J.

6.1 San Javier

The metro line, Line B, arrives to San Javier Station. A clean and smooth, comfortable, low noise level metro ride leaves you at the feet of San Javier Station. No graffiti, no trash in the metro, the metro is super clean and seems very modern. That is in contrast to much of what is visible, when looking outside of the windows observing the poor and neighbourhoods along the route of metro Line B before arriving to the San Javier Station.

This map shows where Line B (orange) Meets Line J (yellow) in the peripheral area of Medellin (metrodemedellin:2019)



Figure (XX) shows the clean, modern, and well maintained metro (Line B) that delivers you to San Javier Station from where you can enter the metrocable Line J

There are fire extinguishers, emergency stops, emergency exits, information signs, and plenty to hold on to when the subway is driving. There are only seats located along the inside of the metro, which means a lot of people have to stand up. But this also means that more people can fit into the train. It looks like people in general are very aware of letting older people and families with kids have a seat.

I leave the Metro Line B when I reach its destination at San Javier Station and one of the first things I notice when I step outside on the metro stations platform is clear yellow lines that are drawn at the place where you enter the train, that are made for safety reasons, so that you don't get too close to the metro, when it arrives or departs. I notice three police officers walking towards me, a security guard and another policeman having a conversation. A boy sitting at the stairs that leads you up to the platform where you can enter the connected metrocables, is told, that he can not use the stair to sit and relax by the police officers. This situation gives me the immediate impression of a high level of security and strict rules of behavior at the metrostations is something that is prioritized.

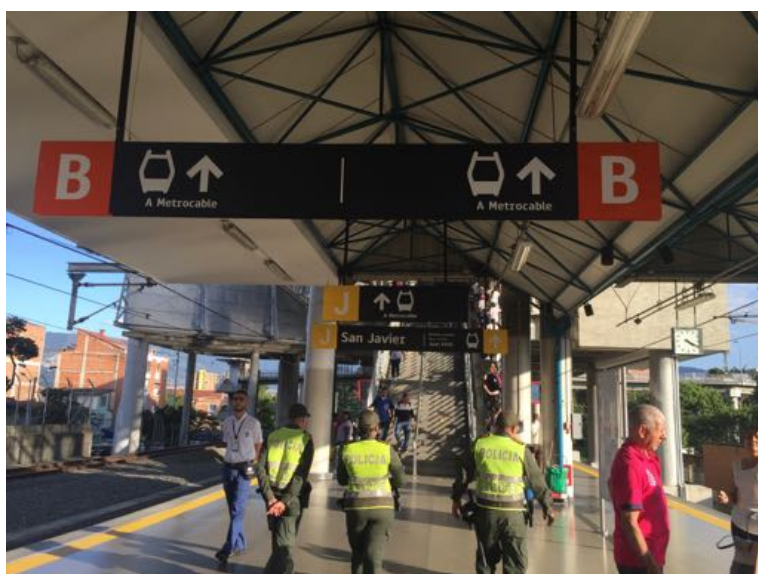


Figure 5: own picture. show the metro station in San Javier

At the station there are watches that shows the time for those who want to know, and signs that tells where to go if you want to exit the station or if you are continuing your journey with the integrated metro-system by using the Metro-cable Line J. The signs also show where to go to take the metro back towards the centre of Medellin – to San Antonio Station. Already when you leave the Metro line B and steps out on the metro platform you are able to see cable cars leaving the station up the hills that are full of informal housing. The metro-cable platform, where the line of people are waiting to enter the cable cars are located, is placed one level further up, and the passengers have to use either stairs or electric stairs to get up to the metro-cable car platform. People are entering the platform of the station in a hurry, when the metro arrives and the doors of the metro Line B open. Suddenly, there are full of people and the queue to the metro-cables starts to get bigger. I see some tourists taking pictures of the place, and it seems to me that it is both local tourist and foreigners. The floor at the metro-station platform is made of concrete and feels hard to walk on. The construction of the San Javier Metro station is placed on a level above the outdoor streets of Medellin, and is open to the outside, so that fresh air and sunlight gets in from many angles. I see a policeman at the end of the queue, who's guiding people into the metro-cable. Everything seems a little bit hectic. A friendly Colombian who is working for the metro-cultura ask, if I speak any Spanish. He would like to hear, if there's anything he can help with. He starts telling me about the societal

change that happened after the social interventions and implementation of new and modern infrastructure. That the service of the metro in about improving life quality in general for the people living in Medellin.

6.2 Entering Line J

After walking up the stairs to the platform where the metro-cable Line J departs from, and after waiting in line to get into the metro-cable Line J, a very friendly and service minded police officer escorts me into the cabin, making sure that the rules are followed when people are entering the cabin. We are 10 people travelling in one cabin even though 8 adults seems to be a more suitable amount of people, as two people has to stand up in the cabin. The cable car leaves the station, and speed of the cable car accelerates, it lifts you up, continues into the air, and immediately we are raised at least 20 meters above the streets and houses underneath the cable car. The houses slowly looks less formal than before, we are travelling over the rooftops, the sound of dogs barking, children playing, cars honking, the wind is whistling in the holes of the window vent system at the top of the door in cabin of the metro-cable. The music from the neighbourhoods underneath us as well as the sound of kids playing in the street gets louder, as we move further into the jungle of informal neighbourhoods.

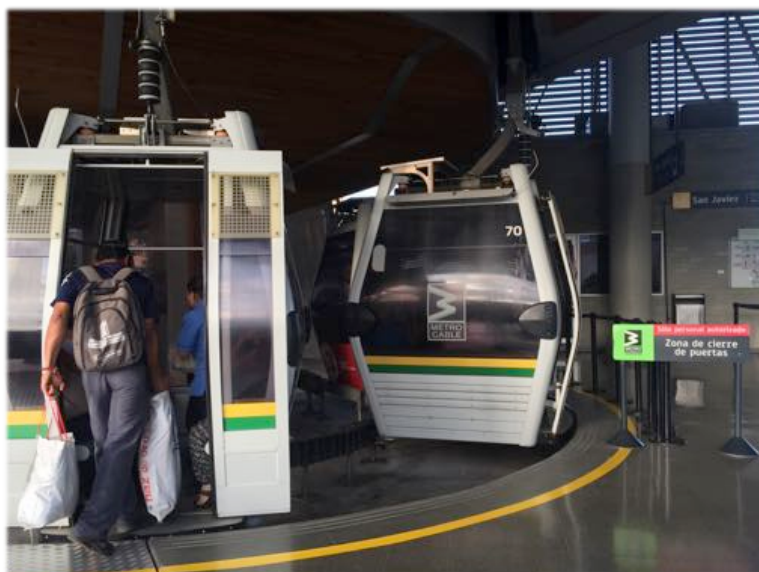


Figure (XX) Picture taken before entering Line J at San Javier Station. Source: (Funck:2019)

Figure 6; own picture. San javier metrocables

Over the rooftops, the sound of dogs barking, children playing, cars honking, the sound of the wind whistling in the holes of the window vent system at the top of the door in cabin of the metro-cable. There are windows to all sides so you can see the hillside filled with informal, semi-finished, construction. You can see how the sunlight falls down on the city's steeply located residential areas, and the horizon also offers a view of the city's exclusive area far away, El Poblado, where the architecture stands in sharp contrast to the buildings located under the cabin that we are travelling in. There is something to hold on to, for travellers who have to stand up in the cable car, or travellers who has to get up when they leave it, and there is seating for approx. 8 adults. There are security rules inscribed on a metal plate by the doors. The floor is made of metal. The seats are cloth covered, as are the backrests. The windows arch out. The cable car is shaped like a square made of glass / plastic and metal, but the centre of the cabin's vertical glass piece is pulled out so that the inside of the cabin has more space. There is also a security camera incorporated into the ceiling of the cabin.

6.3 Juan XXIII

I arrive at Juan XXIII station and leaves the cable car to look around and experience the atmosphere. I walk down the stairs and see families gathered outside the station. I notice is a group of girls and boys on roller-skates having fun. The sound of laughter that is slightly dulled by the mechanical sound of cable cars being pulled further up the mountain by the cables above the lively activities of the area is mixed with the sound of local music from the bars where people are playing pool and eating dinner at the foot of the station. The area seems very secure. It looks like the station functions as a centre to the area, based on the observed activity on the streets outside the station. It feels pretty safe, though it is very different materially from the rest of the city. All the houses are build the same way, with the same bricks, and in the same colours.

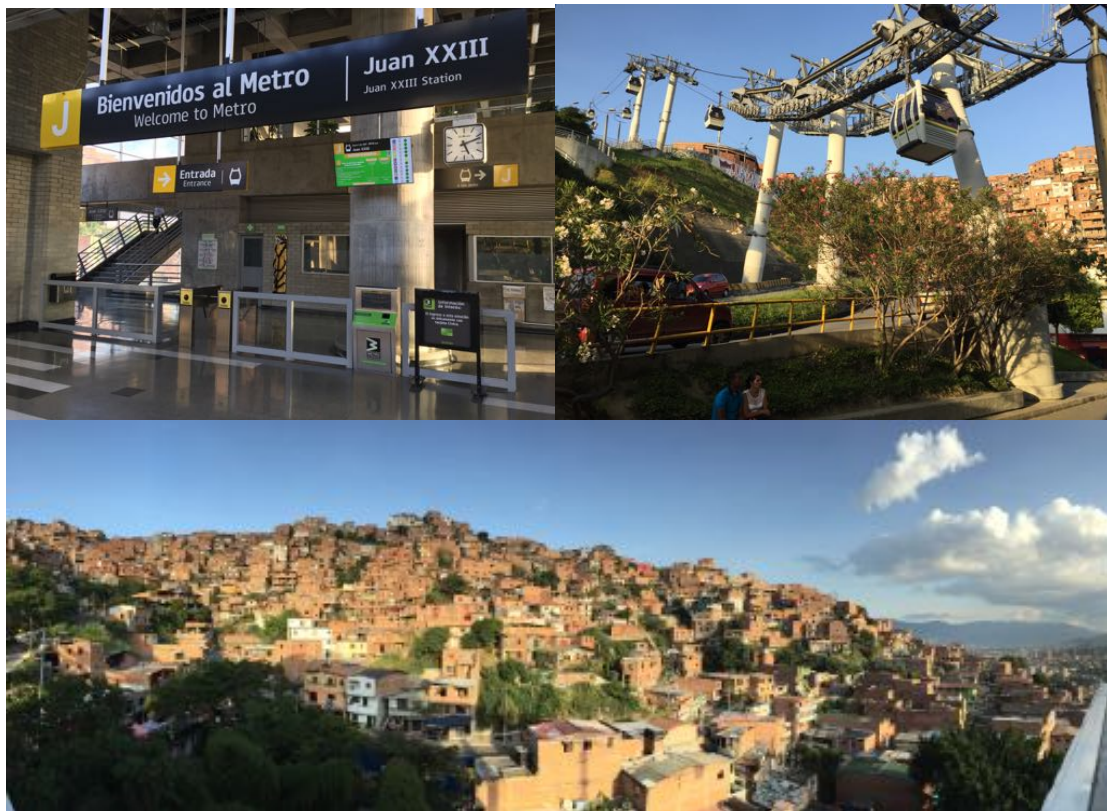


Figure 7: own picture. Juan XXIII

I go back into the metro-cable station and continue my travel with Line J. I reach the top of the first mountain of two on the Line J route, where military posts are located next to a large Christian cross and a viewpoint for tourists. The Metro-cable moves quickly up over the top of the mountain and down the steep slope, which is a little bit more empty, and with less informal houses. Nevertheless, my memory tells me that the number of homes in this area has risen since I worked in San Christobal in 2017 and had to travel with Line J every day to reach the workplace at La Aurora Station. At bottom of the hillside, i see a river and a newly paved modern road crossing Line J's route below us. We cross the river and the road before we begin to rise again and approach station number three on the route of Line J - Vallejuelos.

6.4 Vallejuelos

I leave the metro-cable at Vallejuelos Station to look around and experience the atmosphere. Families are gathered together at the area around the station, the area seems less busy than outside the San Javier Station and Juan XXIII Station, even though this place also seems to be a centre of the neighbourhood. Kids are playing like at Juan XXIII, there are barbershops, and small shops selling beers, candy, chips and other smaller things. A group of young guys are listening to music, some of them dancing. It feels safe, very safe. Probably, one could say that not enough light are installed around the station, which could increase the feeling of safety. The area seems darker around the station compared to the other three stations. The people that I stop to talk with, though, are very friendly and people are smiling when I approach them to talk. Some kids are playing football and one of them nearly hits the lower part of one of the cable cars with the football, while I am not sure, I if it is intentional, and might be "part of the game" to almost hit the cable car. I continue my travel with Line J towards La Aurora Station.

6.5 La Aurora



Figure 8. Own picture. La Aurora station

At La Aurora Station the noise inside the cabin increases when we reach the station. Probably from the noise of other cable cars, from the machinery that makes the cable cars moving steadily, as they slide in to the station. They move and turn around in a line of "half circle", drops of the passengers, picks up the new passengers and continues its travel, leaving the metro cable station of La Aurora, going down towards San Javier station again and towards the integrated metro system's connection, Line B. When i leave the metro cable people in the cabin politely says goodbye to each other. The people sitting next to the metro-cable's doors, seems to be the ones that leaves it first.

I get outside the metro cable and see around 5 shops across the street. I see around 4-5 busses waiting for passengers to enter. Here, there are a lot more life than at the Juan XXIII and Vallejuelos stations. Further up, I see a huge a lot of concrete stairs, small plazas, walls full of graffiti, and on the top, I see the formal houses, very different from the houses that I just travelled above with Line J. The houses are new, build after the Line J was implemented and are called Villa Suramericana. The buildings were finished in 2010. (Source).



Figure (xx) Picture taken at La Aurora Station. It shows that citizens and travellers have the the possibility to connect to public wifi.

Outside La Aurora Station i see people waiting for the busses, not being able to wait at the bus stop, but instead, have to wait in the shadow next to La Aurora Station. It looks like they are trying to avoid the sun, while still being able to run over to the bus stop, when the bus arrives. There are signs that that shows the possibility to connect to public wi-fi at the metro cable stations. When i look to the right and the left, at both of these streets, there are full of small informal stores. Some of them are just pushcarts with different kinds of products like chocolate, water, gum, and cigarettes. Behind the entrance of the station, where the cable cars depart from are a good view to see the cable cars depart, while being able to see most of the city in a

extraordinary view. Locals are enjoying the view, but also tourists, have travelled up here to enjoy it. At 50-100 meters to the right from the station and down the street, tourists have access to a big platform where a viewpoint is constructed.

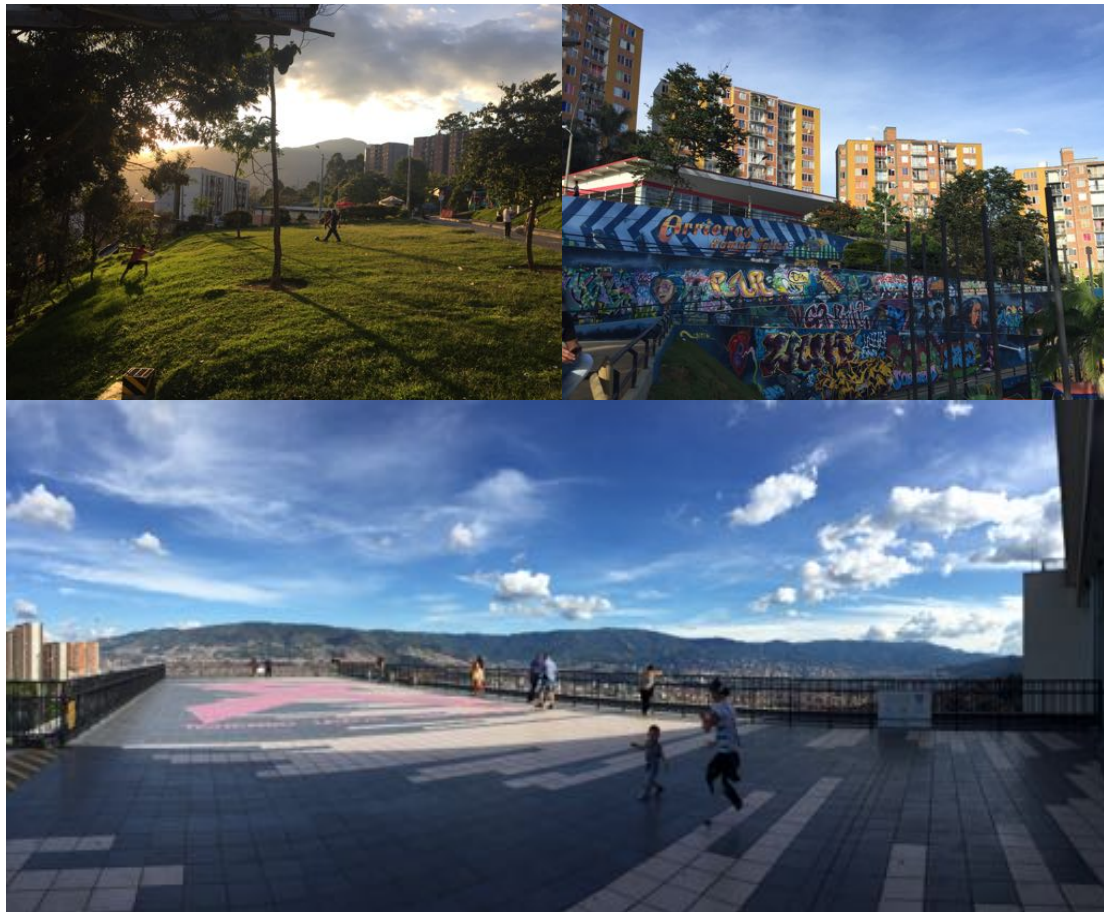


Figure 9: own picture. La Aurora station

The picture above in the left corner (figure XX) show kids playing football outside La Aurora Station on the grass. The picture above in the right corner (figure XX) show the graffiti on the walls at the big Plaza outside La Aurora Station. It also shows the houses called Villa Suramericana that were build in 2010 after Line J was implemented and started operating in 2008. The picture (XX) at the bottom shows the big platform that are integrated into the metro-cable car station at La Aurora and where you have a great view of the whole city.

6.6 Experiences of ‘Other* Materialities on Line J

In this part of the analysis we focus on analysing the answers that I got when I interviewed people about their experience of the materials inside the cable car. At times it could be difficult for people to answer such detailed questions about

materials, since they normally wouldn't reflect much about it. We start by focusing on the floor.

6.6.1 Floor

The Floor of the metro-cables is experienced as a bit unstable, obviously, says one of the respondents, Maria. She also describes the cable car as something that is floating through the air, which at the same time, could be interpreted as something comfortable or smooth. She says that:

"The floor of the metro-cable feels a bit unstable, it is obviously unstable, because it floats through the air." - Maria, 23, traveller.

So the floor of the metro-cable feels unstable because the metro-cable 'floats' through the air. The different way that a metro-cable travels, compared to a car, or a train, is noticed and described as creating a floating, and unstable situation. Another respondent, Juan Carlos, says that the floor is nice, that it is practical, and easy to clean:

"I think the floor is nice. It looks like its practical. Easy to clean hehe. Eehm" – Juan Carlos, 27, traveller.

Pedro Jaramillo says that the floor is actually clean. Which is, as documented through visual ethnography in the earlier material analysis, is also the case in the metro Line B, that are integrated to the metro-cable system at San Javier. Maybe it is a general thing on the metro of Medellin. He says that:

"Yes, very well and clean." Pedro Antonio Jaramillo, traveller with Line J, Vallejuelos.

So based on these statements about the floor of the metro-cable, it feels unstable because the metro-cable 'floats' through the air. The different way that a metro-cable travels, compared to a car, or a train, is noticed and described as creating a

floating, and unstable situation. Besides that, it is experienced as nice, practical, clean. And now we are moving on to how the respondents have experienced the windows of the metro-cables.

6.6.2 Windows

One respondent explains how the glass of the windows are experienced as 'sensitive', and that she is afraid of the quality of the materials is not strong enough, though she assumes that they must be. She says that:

"I think it is a sensitive glass, for sure I do not know how resistant it is but it does not seem of a strong enough material, maybe I am wrong." - Maria, 23, traveller.

One traveller experiences the glass of the windows as safe. And points out the good view that they allow you to have when you are travelling with Line J. He says that:

"They are safe and with a good view" - Salomon, Age unknown, traveller.

There is some sort of insecurity and feeling of being unsafe is experienced with the quality of the materials of the glass from one respondent, but from others the materials seems safe, and the view is experienced as something important. In relation to the positive experience of the view that the windows allow you to have, another respondent is annoyed that the glass of the windows are not clear enough to look through. This is a problem, and a pity, for travellers who want to enjoy the beautiful view, according to Juan Carlos. He says that:

"Sometimes i think it is annoying that you cant see much through the windows. That it is not clearer, the glass.. that it is not clean enough to look through it clearly. And that also means, that your view is not as good as it could be. Because it is a beautiful view, so i think that it is a pity. Eehm" - Juan Carlos, 27, traveller.

Another responded does not mention anything about how unclear the windows are, but explains how the windows makes you feel 'out in the open', that it gives you a feeling of not being trapped, which is interesting, when you compare it to how it can feel to be trapped inside an underground metro full of people. This particular form of mobile situation of travelling through the air while being able to see everything around you could be said to represent another kind of mobile experience:

"And the windows makes you feel like you are out in the open. That you do not feel trapped." - Juan Carlos, 27, traveller.

Even though the windows allow you to see everything around you, there are also some negative sides to it, that are related to the climate that this city has, all the sunlight that is a normal factor during the day. This traveller explains how it can get pretty hot inside the cable car when travelling with it. Also, the ventilation system of the windows that is supposed to regulate the climate is not always efficient.

"It can get pretty hot in here sometimes. Now it is around 5p, so its not that warm right, but sometimes when the sun is really strong it can get pretty hot in here and that can be pretty uncomfortable. Eeh, and there are some air through the ventilation system in the windows, but it is not always enough. I think they could improve that. That would make the trip better. The days where the sun is shining a lot. – Juan Carlos, 27, traveller.

This experience of how the weather, and the materials of the cable car influences the temperature of the human body when travelling with Line J, could be explained as an example of what Jensen (2016) calls the processes of osmosis. When the complex assemblages of human bodies, materialities, such as design systems sites, and infrastructure is permeable to the human, which influences the reactions of the body. Another traveller experience how uncomfortable the strong sunlight can be when travelling inside a metro-cable with windows to all sides. He says:

"The windows are large and allow you to have a visibility of the city, but when there is a lot of sun, a lot of light comes in because it is high up and that can be a bit uncomfortable." - Isabella, 22, traveller.

Another traveller agrees that the sunlight can be a little bit too strong. Maria says that:

"The sun is pretty strong inside the metro-cable" - Maria, age unknown, traveller.

Another perspective that one traveller mentions is how the view could be interpreted as some sort of entertainment when travelling with Line J. That if you get bored while travelling, you are able to just look out the window and enjoy the view. Tatiana says that:

"The windows are really cool. Because when you are bored you can just go up there and enjoy the view" - Tatiana, 17, traveller and living at La Aurora Station.

To sum up the different experiences that travellers have of the materials of Line J, there are both negative and positive experiences, and some of them are also contradictory. The big windows are experienced as safe, but one traveller still feels a bit of insecurity of travelling with Line J because of the quality of the windows. The view is experienced as something important, but for one traveller, the windows are not clear enough to look through. This is a problem, and a pity, for travellers who want to enjoy the beautiful view. Also, the big windows makes you feel 'out in the open', and as you are travelling through the air while being able to see everything around you. Inside the metro-cable it can get pretty hot and the ventilation system of the windows that is supposed to regulate the climate is not always efficient enough. This experience of how the weather, and the materials of the cable car influences the temperature of the human body when travelling with Line J, could be called processes of osmosis. Finally, one traveller sees the beautiful view as a great way to be entertained while travelling.

6.6.3 View

Related to the experience of the materials of the windows are the experiences of the view. A lot of travellers who were asked about the experience of the windows also mentioned their experience of the view in their descriptions and registrations of the material of the windows. An analysis of the experience of the view is multi-sensorial. Even though the eyes are the most important tool used by the travellers to register the view, I would argue that other senses are influencing the way people experience the view, and that it is impossible to isolate one sense from the other totally. One respondent explains how the view is very appreciated both morning, afternoon and evening. And that she thinks that it is really nice. She says that:

"The view, it is beautiful both morning and afternoon and night are appreciated, it is really nice" - Maria, 23, traveller.

Another traveller says that he thinks that the view is really good, and that you are able to see the entire city from the Line J, all the neighbourhoods and also the stadium. He says about the view that it is a:

"Very good view. You can see almost the entire city, the stadium, and a lot of the neighbourhoods." - Salomon, age unknown, traveller.

This traveller focuses on the great overview you have of the whole city, which is pleasant, because you are able to notice the changes that happens in the city from this perspective. She says:

"The view is pleasant, because you can see how the City is formed, and also the change that is happening." - Isabella, 22, traveller.

So the perspective of the city that the view from Line J makes you notice the city in a different scale, and how the city changes in this bigger scale or perspective.

The distances that you are able to view the City from, influences how you experience the city. One other traveller even explains how you can learn new

things about your own city, such as discovering new places that you did not know existed, because of the overview that it gives while floating in the air. She says:

"The view is nice, you can see places from the air that you did not know existed." – Diana, 24, traveller.

This backpacker and tourist that i interviewed agreed that the view is nice, but also had the experience that are travelling with Line J is something comfortable. He says:

"It is a comfortable way of travelling and you get a nice view" – Olav, age unknown, backpacker and traveller with the Line J.

The view is experienced as good both morning, afternoon and evening, and a positive thing is that you are able to see the entire city from the metro-cable, you are able to notice the changes that happens in the city from this perspective. The city can be viewed form a bigger perspective from the metro-cable, which influences how you experience the city when you view it. Also, that makes you able to learn new things about your own city, by looking at it from these distances, such as discovering new places you did not knew existed.

6.6.4 Travelling with Line J

The experience of gravity while travelling with Line J could be different than when travelling with a bus, metro, bicycle or with a car, since the passengers are moved through the air pulled forward by the technology that attach the cabin to the cables, which makes the cabin moves forth and back while transporting it, creating a feeling of floating in the air. This traveller describes how she sometimes gets scared and gets dizzy when travelling with Line J, but after sometime, she has got used to the feeling of it, and now she has lost her fear. She says that:

"Sometimes I'm scared. I have been dizzy a couple of times, but when you get more experienced you lose the fear" - Maria, 23, traveller.

Another traveller experience a small pressure in the air sometimes when he travels with Line J, but he does not think it is because of the gravity, since he does not think that the cable car goes up the air fast enough to influence the body like this. He says that:

"Sometimes you can feel a small pressure in the ears. But it is not that, I think. Because the speed is not that fast. And you do not go up in the air that fast." – Juan Carlos, 27, traveller.

While Carlos explains how he sometimes experiences a small pressure in the ear, Salomon says that being inside the cable car can feel like a vacuum. But he has never experienced any uncomfortable movements of the cabin, that it is very stable when it is moving, even though it sometimes just stops on its way up or on its way down the hill. He says that:

"I have not experienced any uncomfortable movements. It (the cable car) feels stable. There are no sudden movements. Sometimes it stops. And it feels a bit like a vacuum." – Salomon, age unknown, traveller.

Even though some of the travellers experience the movement of the cable car to be very comfortable, it can also be scary to travel to travel with it. Especially when it is the first time you travel with it, and when you are four years old as this young guy when he was interviewed. He said that:

"The cable car is really nice, but he is afraid when the cable car is moving in the air" - Julian, 4, traveller. (Translated)

Another traveller also feels a bit scared, and sometimes think of the scenario of what would happen if the cable car falls down. The distances down to the streets and houses underneath influences this travellers reflections about the safety and

the possible consequences if the cable car falls down. But she also mentions how she is pretty sure that maintenance of Line J is constant and that many studies have been made, to make sure that it would not happen. She says that:

"Gravity, it feels a bit of a vertical to be up in the cable car, that is how I feel, and sometimes I think about what would happen if this falls down. But I read that before they were building the metro-cable..... for Medellin, there were made a lot of studies about how to do constant maintenance. And when it is raining or heavy storms, it does not work. They stop it to avoid a catastrophe." - Isabella, 22, traveller.

This traveller explains how the fear that occurs in the beginning when travelling with Line J is temporary, and that, when you get used to it, the fear disappears. She says that:

"Well you get use to it. In the beginning it was like scary but then it becomes ordinary." - Jennifer, traveller with Line J, Vallejuelos. (Translated)

This traveller has had the same experience of loosing the fear after getting used to travel in this way. He also mentions that it can be experienced as scary when the metro-cable sometimes stops while its on its way up. But that it slowly feels normal. He says:

"Well people get scared but when you're use to it is normal. When someone just arrived they get scared and they say "so scary that it stopped" or things like that, but when you're used to it you feel normal." - Guillermo, traveller with Line J, Vallejuelos. (Translated)

To sum up the experience of travelling with Line J, the travellers said that they could get scared and gets dizzy, one person experienced a small pressure in the air sometimes, inside the cable car could feel like a vacuum, another said that he had never experienced any uncomfortable movements of the cabin, and the cable car is very stable even though it sometimes just stops. One traveller felt it scary

when the metro-cable sometimes stops while it is on its way up though. The distances down to the streets and houses underneath the metro-cable influenced made one traveller think of the possible consequences of what would happen if the cable car fell down. Several of the respondents though, said that after some time they have lost the fear of travelling with Line J and have gotten used to it. Now the analysis continues with the focus on colours.

6.6.5 Colours

Analysing the colours of the metro-cable is part of the multi-sensorial approach of analysing situational mobilities design in detail. How colours are part of what makes this mobile situation possible might be discussed, especially because the importance of peoples aesthetical experience when travelling with a metro-cable in the morning on their way to a 8 hours workday could vary and be very subjective. But still, some of the respondents explained how they could also have a deeper meaning. Isabella said that:

"The colours are equal to the Metro de Medellin logo, since it is part of the integrated transport system. They also correspond to those of the Antioquia flag... for example at the flower fair, they continue with the metro logo, but they add figures or photos corresponding to the celebration" Isabella, 22, traveller.

This traveller explains how the colours of the metro-cable Line J are the same as the ones used for the rest of the metro-system, and that it is the same colours as in the Antioquia flag (Medellin is the capital of the Antioquia department in Colombia). The colours that are used could be interpreted as way of creating and giving identity to Line J, trying to integrate it culturally and emotionally by using colours that traveller might identify with. Juan Carlos brings in another perspective by explaining how he experience the colours. He says that the colours might not be the most beautiful ones, but that he thinks they are ok. He says that:

"The colours that are used, are maybe not the most beautiful ones. But it works." – Juan Carlos, 27, traveller.

Juan Carlos says that the colours could be more elegant, but that they works - in other words, they do their job, making it a sort of a aesthetically experience to travel with Line J. The last respondent thinks the colours are nice and tasteful. He says that:

"The colours are nice, and tasteful." – Salomon, age unknown, traveller.

To sum it up, the colours are the same ones that are used in the Antioquia flag, and has some symbolic related to them, one traveller think that they are tasteful, another just thinks that they do the job. We continue to look at how the travellers experience of the seats of Line J.

6.6.6 Seats

The statements from the first traveller that is presented, thinks the seats are not soft enough, and is not satisfied with the materials that are just hard aluminium. He thinks better of the seats covered with fabrics. But according to Juan Carlos, its works, and he also mentions how the trip is not that long, and therefore it does not have to be that comfortable. He says that:

"The seats are ok. Maybe these ones are not so soft. It is just aluminium or something like that. But I think some of the seats are covered with fabric, which is more nice. But it is okay. It works. And the trip is not that long. So it is ok."- Juan Carlos, 27, traveller.

Juan Carlos mentions the fabrics and the materials of the seas as something that makes a difference in his experience of how comfortable it is to be mobile with Line J. How Line J hosts this mobile situation differently, depending on which cable car you enter. There are ones with or without fabrics on the seats, which

apparently makes a difference in the experience of comfort when being transported. Another traveller agrees, that they are comfortable enough for such short trips, she says that:

"The seats are comfortable for such short trips". – Diana, 24, traveller.

This traveller is a bit more critical, he is satisfied with the seats, but does think that they are too comfortable. He thinks that they are too hard. He says that.

"And the chairs are good, but are not too comfortable. They were way too hard." – Julian, 4, traveller.

This traveller, Maria, agrees that the seats are not 100% comfortable. She says that:

"The seats are not 100% comfortable." - Maria, 23, traveller.

The last person I spoke to about the experience of the seats had only something positive to say about them.

"The seats has good comfort when travelling." – Salomon, age unknown, traveller.

To sum it up, people are generally satisfied with their experience of the materials of the seats in Line J. One traveller though, thought they are a bit too hard to sit on, another explained how some of the cabins have fabrics on their seats, and that it makes them more comfortable. Which means that the metro-cable line, Line J, hosts this mobile situation differently, depending on which cable car you enter. There are ones with or without fabrics on the seats, which apparently makes a difference in the experience of comfort when being transported. Lets move on to the analysis of the comfort when travelling with Line J.

6.6.7 Comfort

The comfort of Line J is experienced as good according to this traveller. He points out that it is not a luxury, but that it works, that it is practical, and that the important thing is that the metro-cable gets you to the place where you want to go. He says that:

"I think the comfort is good. It is not luxury, but it works. Its practical. It gets you where you want to go." - Juan Carlos, 27, traveller.

This traveller Salomon agrees, he says:

"Well very comfortable" – Salomon, Age unknown, traveller.

Another traveller, Isabella, explains that she feels that Line J is a comfortable space to be in while getting transported, and that she feels safe while getting transported to where she lives. She says:

"The metro-cable is comfortable, safe, suitable for people to enter. Yes, I feel like the cable car is a comfortable space to be in, while getting transported to my home or to my workplace." – Isabella, 22, traveller.

These three travellers agree that travelling with Line J is comfortable. They say:

"It is cute, that it is nice, it is comfortable." - Tatiana, 17, traveller. La Aurora Station (Translated).

"It is comfortable." – Marí. 36. traveller with Line J. Juan XXIII. (Translated).

"Its nice and comfortable" - Nelvis, 25, shop-owner at Juan XXIII, living at Juan XXIII.

One traveller explains that the metro-cable is always comfortable, and that it is different from when you are travelling with the metro line. That with the metro-cables its always comfortable and fast.

"It is really comfortable. He says that the metro (not the cable car) sometimes gets a lot of people, sometimes, so its not that easy to move. But with the cable car is always fast. And always comfortable to travel with" - Ovidio, 34, traveller with the Line j, interviewed at Juan XXIII. (Translated).

Another thing that is connected to the word comfort is safety, according to this traveller, Oscar Murillo: He says that the metro-cable is comfortable because of the safety he experiences:

"Yes, I like it, I feel comfortable, because there is a lot of safety" - Oscar Murillo, 68, traveller with Line J, Juan XXIII, he only has one leg so he moves around in his wheelchair. (Translated)

To sum it up, the experience of comfort when travelling with Line J is not a luxury experience, but it works, it is practical, and that is the important thing, as well as that it gets you to the place where are want to go. It is a comfortable space to be in while getting transported to your home. It is better than travelling with the regular metro-line because the metro-cables are always comfortable and fast. Also, it is comfortable because of the safety it provides. Now lets look at how the speed of Line J is experienced:

6.6.8 Speed

The speed of the metro-cable could seen as one of the factors that makes a mobile situation possible. Here, we can talk about the idea of mobilities design and affordance. The speed of Line J is one of the factors that makes the travellers able to move, and it is a part what the materialistic environment of Line J offers, to move through space with a certain speed, a dynamic between the physical environment and the human body, that makes it possible to be mobile. Speed is what this part of the analysis of the materialities focus on:

The metro-cable gives a feeling of going somewhere, according to this traveller that I spoke to. He says that the speed feels nice, and even though you might not travel that fast, you still have a feeling of moving relatively fast:

"And it feels nice to move in this way. You feel like you are going somewhere. Even though it might not go that fast you still feel like you are moving relatively fast in a very comfortable way." - Juan Carlos, 27, traveller.

This traveller explains how she thinks that the metro-cable is moving really fast. She says that:

"It is very fast to go by metro-cable, really, it saves a lot of time" - Maria, 23, traveller.

This could be interpreted as, relatively fast, in comparison to other ways of being mobile, or maybe, she just thinks that it travels really fast. Two other travellers agree that Line J is really fast. They say that:

"It is really fast." - David, age unknown, traveller.

"It is really fast". - Marí, 36, traveller with Line J, interviewed at Juan XXIII. (Translated).

The people that I spoke to about speed, all felt that Line J is moving really, or relatively fast. This mobile situation that Line J offers are experienced make it possible to move relatively fast through space, as it is experienced by these travellers. The mobility affordance is relatively valuable, and the physical environment of this mobility design offers these travellers to move fast, according to their own experience of what fast is.

6.6.9 The Space Inside Line J

The space inside the cabin of the metro-cable at Line J is experienced as small, but with the space that is necessary, according to Maria, who is a traveller with Line J. She explains that:

"The space is small, they are small the cabins, but I think it has the necessary space that is needed" - Maria, 23, traveller.

Another traveller, Salomon, describes the space inside the metro-cable as neat, and nice. He says that:

"The space is nice. Its very neat" – Salomon, age unknown, traveller.

Another traveller describes the space of the cabin as comfortable, and that they can transport a number of people without the space inside being too tight. Diana says that:

"The cabins are also comfortable, they fit a certain number of people without being tight" – Diana, 24, traveller.

To sum up the descriptions of the space inside Line J, it is experienced as a little bit small, but comfortable, nice and neat, and with the space necessary to transport a certain amount of people.

6.6.10 Distances (To The Ground)

Analysing the distances in between the materials is part of the perspective of analysing the 'other' kinds of materials. Therefore I asked how the travellers experienced the distances, and in particular, the distances from the metro-cable and to the ground, when travelling with Line j. One traveller said that:

"I don't know how far it is from the ground, it can be scary to look down." – Maria, 23, traveller.

She experiences the distances to the ground as something that makes he afraid. Another traveller explains that you get used to the distances to the ground when you travel with metro-cable. That he estimates that the cable car are more or less 50 meters from the ground, and that the distances makes you able to have a great view, a great perspective of the city, and that it is a rare opportunity to be able to travel in this way. He says that:

"You get used to it, because we are, maybe 50 meters up in the sky, the view is really good. And it is not often that you travel this way. It is nice that you have the perspective of the city" – Juan Carlos, 27, traveller.

The distances from metro-cable and down to the ground when travelling, is estimated to be around 50 meters at times. It can make the travellers a little bit afraid, but they are getting used to it, and it also provides the traveller with a great view, and a the great perspective of the city.

6.6.11 Safety

This analysis final point is safety: How the materials of the cable-car makes the travellers feel safe. The first respondent explains that he feels really safe, and that he has never felt insecure when travelling with Line J. He says that:

"They make you feel safe. Very safe. You never get the feeling that it is unsecure. Never. Eeh..." Juan Carlos, 27, traveller.

Another traveller points out the influence of the people that works at the metro, how they provide safety for their travellers, he says that:

"The safety that is offered by the people working at the metro is good." – Salomon, age unknown, traveller.

For this traveller the most important thing about the Line J is that it is safe to travel with. He explains that:

"The cable car is really important if you want to move in this area because that it's fast, it's cheap and you are safe..... for example the motorcycle is running, and he is walking, he is afraid that someone is going to hit him. So for him the cable car is safety..... He can be sure that nothing is gonna happen when he is inside the cable car". - Roberto, 59, traveller with Line J and visitor of the area. (Translated).

The materialities of the mobility-design, provides and represent safety, according to Roberto. He experiences that it as a safe place, a safe way to travel, where other modes of transport can not hurt him, while he is on his way. Another traveller points out, that the cable car needs seatbelts for the kids, because the metro-cables sometimes makes an abrupt breaking. So, he would put in seatbelts in Line J for the kids to be safe. He says that:

"The cable car needs seatbelts for example for the kids or something like that. Because they are really abrupt all the time... So for safety reasons it could be better to have these things for the cable car." - Emilio, age unknown, traveller with Line J, citizen at Juan XXIII.

Guillermo, a traveller with Line J explains that he experience the safety as very good. The stations are well organized and clean, and everything is coordinated very well.

"All very good, a lot of safety. The stations are well organized and everything is well coordinated, is clean." - Guillermo, traveller with Line J, Vallejuelos. (Translated)

Oscar also thinks the safety is great, he says that:

"Very safe" - Oscar Murillo, 68, traveller with Line J, Juan XXIII, he only has one leg so he moves around in his wheelchair. (Translated)

So in general, the safety is experienced as good on Line J. The metro-cables are well organized and clean. But one traveller points out that there is a need of

seatbelts, especially for the kids. This could be practical in regards to safety, because sometimes, the metro-cable make sudden stops up during the trips.

6.6.12 Sum up of Analysis of 'other' Materialities

Floor

So based on these statements about the floor, it is experienced as nice, practical, clean, and a bit unstable because of the metro-cables movements when travelling. It seems like the experience of how gravity feels inside the cable car when travelling and the materials of the floor combined are influencing the experience of being moved when travelling with Line J. Now we are moving on to how the respondents have experienced the windows of the metro-cables.

Windows

To sum up the different experiences that travellers have of the materials of Line J, there are both negative and positive experiences, and some of them are also contradictory. The big windows are experienced as safe, but one traveller still feels a bit of insecurity of travelling with Line J because of the quality of the windows. The view is experienced as something important, but for one traveller, the windows are not clear enough to look through. This is a problem, and a pity, for travellers who want to enjoy the beautiful view. Also, the big windows makes you feel 'out in the open', and as you are travelling through the air while being able to see everything around you. Inside the metro-cable it can get pretty hot and the ventilation system of the windows that is supposed to regulate the climate is not always efficient enough. This experience of how the weather, and the materials of the cable car influences the temperature of the human body when travelling with Line J, could be called processes of osmosis. Finally, one traveller sees the beautiful view as a great way to be entertained while travelling.

View

The view you have when travelling with the Line J is experienced as comfortable, which lead to the next part of the analysis about the experience of gravity and of

travelling with Line J in general. But first I want to sum up the important points of the travellers experience of the view: The view is experienced as good both morning, afternoon and evening, and a positive thing is that you are able to see the entire city from the metro-cable, you are able to notice the changes that happens in the city from this perspective. The city can be viewed on a bigger scale from the cable car which influences how you experience the city. Also, that makes you able to learn new things about your own city, by looking at it from these distances, such as discovering new places you did not knew existed.

Travelling with Line J

The travellers said that they could get scared and gets dizzy. One person experienced a small pressure in the ear sometimes. When being inside the cable car, it could feel like a vacuum. Another said that he has never experienced any uncomfortable movements of the cabin, and the cable car is very stable. One traveller felt it was scary when the metro-cable sometimes stops while it is on its way up. The distances down to the streets and houses underneath the metro-cable made one traveller think of the consequences of what would happen if the cable car fell down. But several of the respondents said that after some time, they have lost the fear of travelling with Line J and have gotten used to it.

Colours

The colours are the same ones that are used in the Antioquia flag, and has some symbolic related to them. One traveller think that they are tasteful, another just think that they do 'the job'.

Seats

People are generally satisfied with their experience of the materials of the seats in Line J. One traveller though, thought they are a bit too hard to sit on, another explained how some of the cabins have fabrics on their seats, and that it makes them more comfortable. Which means that the metro-cable line, Line J, hosts this mobile situation differently, depending on which cable car you enter. There are ones with or without fabrics on the seats, which apparently makes a difference in the experience of comfort when being transported. Lets move on to the analysis

of the comfort when travelling with Line J.

Comfort

To comfort of travelling with Line J is not a luxury experience, but it works, it is practical, and that is the important thing, as well as that it gets you to the place where are want to go. It is a comfortable space to be in while getting transported to your home. It is better than travelling with the regular metro-line because the metro-cables are always comfortable and fast. Also, it is comfortable because of the safety it provides. Now lets look at how the speed of Line J is experienced:

Speed

All the people I spoke to felt that Line J is moving really, or relatively fast. This mobile situation that Line J offers makes it possible to move relatively fast through space, as it is experienced by these travellers. The mobility affordance is relatively valuable when it comes to speed, and the physical environment of this mobility design offer these travellers to move fast, according to their own experience of what fast is.

The Space Inside Line J

The descriptions of the space inside Line J, it is experienced as a little bit small, but comfortable, nice and neat, and with the space necessary to transport a certain amount of people.

Distances

The distances from metro-cable and down to the ground when travelling, is estimated to be around 50 meters at times. It can make the travellers a little bit afraid, but they are getting used to it, and it also provides the traveller with a great view, and a the great perspective of the city.

Safety

The safety is experienced as good on Line J. The metro-cables are well organized and clean. But one traveller points out that there is a need of seatbelts, especially

for the kids. This could be practical in regards to safety, because sometimes, the metro-cable make sudden stops up during the trips.

7. Critical Points of Contact

The second part of this projects analysis focuses on the Critical Points of Contact of the Metro-cable Line J. The critical points of contacts were investigated by using two methods: One method is a questionnaire made at La Aurora Station - the end station of the metro-cable car Line J. It was conducted with passengers that were travelling to and from La Aurora Station towards San Javier Station. The questionnaire were made based on the knowledge that came from qualitative interviews about issues in relation to the experience of flow of mobility when travelling with Line J. As already mentioned, qualitative interviews where also made. These were made to collect information that could provide the project with a more qualitative understanding of which problems that influence the flow of the metro-cables negatively. This part of the analysis is divided into four categories of critical points: Maintenance, peak hours, technical problems and weather conditions. First, the data from the questionnaire is presented and then some of the data from the qualitative interviews are presented and analysed. An overall analysis of all the data is made at the end of this analytical chapter.

7.1 A CPC Questionnaire

The Critical Points of Contact questionnaire were made at La Aurora Station with 200 people in total. The first question focuses on what the travellers experience as most problematic on their trip; Possible answers: The queues in the peaks hours, the prices, the waiting time for connecting modes of transportation, or other things. 200 people answered the first question. The second question tried to get a better understanding of the physical location of where these problems occurred. They had two options of answers in the questionnaire: The station

where the metro line B is connected to the metro-cable Line J, or the end station of the metro-cable Line J. I did not manage to get as many people to answer the second question. 96 people answered the second question. Even though only half of the people responded, compared to question one, the answers still provides the project with an indicator of where some of these critical points are located.

What which problems do you experience as most critical for the flow of mobility with Line J Line J?

1. The queue in peak hours? 136
2. The prices? 6
3. The time you have to wait transport connections? 58
4. Other things? 0

Where does these problems occur most often? San Javier? La Aurora? Other places? (96 respondents chose to answer this question)

1. San Javier 41
2. La Aurora 55

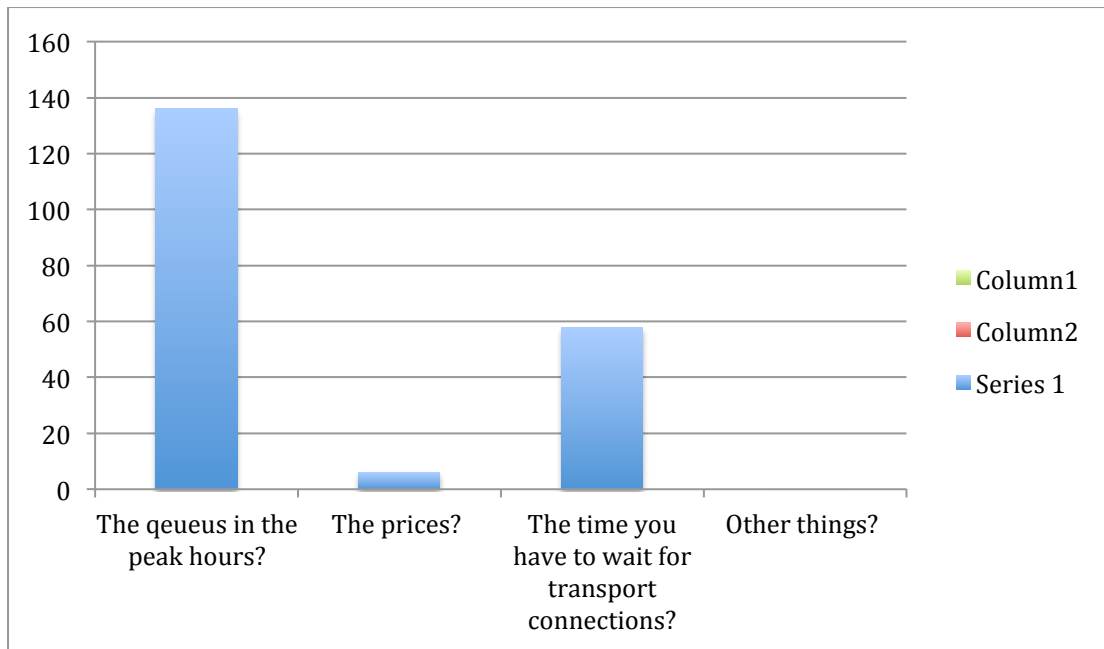


Figure 10: Own figure: Funck: 2020

(Table: XX. Source: Funck: 2020. Graph illustrates which problems the travellers experience as most critical for the flow of mobility at Line J. (Funck: 2020).

This questionnaire illustrates that the prices of the metro is not perceived as the biggest obstacle by many of the respondents. The queues in the peak hours and the time you have to wait for the other connecting modes of transport are more important or more critical for the flow of mobility with Line J. The people that were interviewed were interviewed at La Aurora station. The location of where the interviews were made could have been the reason for most of the respondents experiencing more critical mobility problems at La Aurora Station (55) than at San Javier Station (41). But, it could also be an indicator that the queues in peak hours and the connecting transport at La Aurora has a more critical character than at San Javier Station. But it could also be, that the connecting metro Line B at San Javier is more reliable than the busses that picks up people at La Aurora Station, which could influence the experience of queues and waiting time for connecting means of transport.

7.2 Line J - Experiences of CPC's

In this part of the analysis of CPC's of Line J, we investigate the experiences of critical points of contact, according to the travellers that are using Line J. We look at what creates Critical Points of contact, which results in obstacles for the mobility flow on Line J. The five main things that are investigated are: Maintenance, peak hours, capacity problems, transport connections, weather conditions and Line J connections.

7.2.1 Maintenance – Creating CPC's

The first part of this qualitative CPC analysis focuses on how the maintenance stop the system from working, how the metro-cable station along the route of Line J becomes a critical spot for mobility, as it disconnects the population living around the three last stations of Line J to the metro Line B and to the rest of the integrated mobility systems in the city. These areas are already socially excluded areas, and becomes even more disconnected physically and thereby also socially when this happens. The lack of technical efficiency of this technology thereby influences the social inclusion for certain period of time when the metro-cable is closed for maintenance. In an interview with Luis, a shop-owner at Juan XXIII metro-station, he explains they sometimes close the metro-cable for maintenance and that it affects people a lot, because they have to use the busses to get to their destinations. He says that:

"The days they close it, for maintenance or, that is like 8 days or a week. A week in the year. They close it for maintenance. He says that at that time people just cry. They feel so bad because they have to take other busses or they have to take another way of transport. So its really something necessary here". -Luis, 51, shop-owner at Juan XXIII, has lived there for 16 years, and a traveller with the Line J.

Another traveller explains how it makes travelling very difficult for the ones that do not have a car or a motorcycle, when the system is shut down because of maintenance. And that it makes people's situation very complicated, because it is more complicated to take the bus because you would have to make more stops on your journey when you are not using Line J.

It gets complicated a little bit for everyone at least to those who doesn't have a car or a motorcycle because it gets harder to get a bus and there is people who have to go to Itagui so they have to spend 2 or 3 tickets so it actually gets really complicated when it stops." - Esteban Guitierrez, citizen and traveller with Line J, Vallejuelos. (Translated)

I spoke to one of the security-guards, who explained, that they are trying to do the maintenance of Line J every day, at night time, when the system is closed. I guess, this is a way to minimize the amount of days a year, where the system is forced to close for maintenance which disconnects the travellers from the rest of the City. He said that:

They do a lot of maintenance every day, and at night time when the system close". - Juan Miguel Guisao, Security guard at Vallejuelos Station.

And now we move on to how the peak hours makes the metro-cable stations of Line J a critical point of contact for the traveller that uses its service.

7.2.2 Peak Hours – Creating CPC's

The metro-cable lines can become critical mobility hot spots when it is rush hour at the metro-cable stations as I have already illustrated through the questionnaire earlier. In this part of the analysis I tried to investigate more in depth about how the rush hour at Line J is experienced by the travellers, how it makes a difference for their everyday life and their flow of physical mobility with Line J. I spoke to John outside the Juan XXIII metro-cable station, he told me that

the rush hour are at 7-8 at night, especially at the bigger station in San, because that is when people get home from job. He said that:

At the bigger station, San Javier, a lot of people at this time, at 7 or 7-30 or 8, because they are coming from work, and probably they wanna go home” - John, 71, traveller with Line J, living at Juan XXIII for 5 years.

Another traveller explains that the only bad thing about Line j is the long queues in the morning. Marí says that:

”The only bad thing is all the big lines that makes in the morning because, of course a lot of people takes it” - Marí, 36, traveller with Line J, interviewed at Juan XXIII. (Translated).

Another traveller agrees about how bad it is, and says that in the morning, its worse between 5am to 6am and in the afternoon its from 4:30pm to 7pm. He says that:

”Thats the bad thing about taking the metro...from 5 am until 6;30 am, and in the evenings from 4:30 pm until 7 pm.” - Breiner, 21, Citizen living at Vallejuelos, user of the Line J. (Translated)

This security guard working at the metro, who is also a traveller, explains how the speed of the Line J is reduced in the peak hours, and that you sometimes have to wait 40-60 minutes in San Javier Station to take the metro-cable car up towards La Aurora Station. It also influences the service because of the amount of people it has to transport. He says that:

”There are some days that you wait in line for about 40 to 60 minutes in San Javier to take the cable car up... It is slow and the service goes slower because of the amount of people using it.” - Milton, Security-guard at the metro, and traveller with Line J, Vallejuelos Station.

Juan Carlos, who is a traveller with Line J explains that he thinks the capacity of the metro is not sufficient enough to move all these people during peak hours:

"But of course sometimes in the peak hours it seem like there is not enough space in the metro. Not enough space to move all these people that goes t work" – Juan Carlos, 27, traveller.

Also a senior mobility researcher from Universidad Nacional de Colombia, that I interviewed about the peak hours, says that Line J is very crowded around 6pm:

"Yeah, now, I visited it last week and I could see a lot of people returning in the afternoon at 6pm in the afternoon. It was crowded" - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia.



Figure 11: own picture. La Aurora station

Figure (XX) taken at La Aurora Station during peak hours in the afternoon.
Source: (Funck: 2020)

One traveller uses the word complicated and says that you got to have patience. Another traveller says that it is boring and that he gets angry and wants to leave because of the queues.

"Well, it is very complicated because a lot of people use it so there are big lines but is just a matter of patience because it runs fast." - Guillermo, traveller with Line J, Vallejuelos. (Translated)

"It is really boring because there is a big line, you have to wait a lot and you even get angry with the people and you feel like leaving, but because you have paid your ticket already you have to wait. That's horrible but that's life" Yeison, citizen and traveller with Line J, living at Vallejuelos Station. (Translated)

One traveller explains how you sometimes have to stand up in the metro-cable when you travel around 6am in the morning. And that they divide the line of the waiting travellers into two groups in rush hour: One group that needs to sit down, where it takes longer time to get in, and one line with a group who are willing to stand up. He says:

It depends of the hour. Around 6 am, during peak hours when you're going to work you don't find a space so you have to be standing or wait a lot until a cabin goes empty and in the way back if you don't make a line for 20 or 30 minutes you can't be sitting or if you make a shorter line you can go standing." Juan Esteban Murillo Arias , 21, Vallejuelos. (Translated)

One traveller from Vallejuelos Station explains that the peak hours already starts at 4:30 in the morning, and that at Vallejuelos the problem is not as big as in the other two big stations La Aurora and San Javier. He explains that the amount of people are getting lower at 7.30 am. He also explains something very interesting, that they lower the speed of the cable car when it is not peak hours.

"Yes, the peak hours start around 4:30 am. So in this station by itself, because is not so transited like the principal stations you don't see it that much, but for example at San Javier Station, San Antonio's or La Aurora. I mean during mornings is a

problem one way and then at night the problem is in the other direction. In the morning to go to work is a problem In all the stations from the Comuna 7 and 13 metro is a problem to move at 7 am because the amount of people who goes to work is incredible. Around 7 and 7:20 am the amount of people is getting lower so they even low the speed of the cable car.” - Juan Esteban Murillo Arias , 21, Vallejuelos. (Translated)

Esteban Guitierrez, who s a traveller living at Vallejuelos station, says that you get used to these peak hours. That, in the beginning its very difficult, but when you do it every day, you get used to it, you adapt to it. He mentions the heat, and how uncomfortable it feels to be waiting in line with all these other people as things that makes the travel critical, and stressing. He says that:

”It is something that you get use to it. It is something that becomes routine so everyday it is the same and people get use to it. The first days are very complicated because if you’re not used to it, you get stressed, and the heat, the uncomfortable, but hen times passes you adapt to it.” - Esteban Guitierrez, citizen and traveller with Line J, Vallejuelos. (Translated)

This group of people that i interviewed explained other people sometimes gets “smart” when there is a long queue due to the peak hours. That people sometimes cheat in the line to get in to the metro-cable quicker.

”So they say that they (the metro-cables) move fast, but one of them have waited up to 20 minutes just to get inside, because of the amount of people that are waiting. And also, there are a lot of people that make the line, and then, if you are my friend then take you into my line, and then, like then people start getting ”smart”. – David + friends, age unknown, travellers with the cable car. (Translated)

In the next part of the CPC analysis I look at he capacity problems of Line J and how it creates CPC at the metro stations along the route of Line J.

7.2.3 Capacity Problems – Creating CPC's

The capacity of Line J and also the capacity of the metro network of Medellin in general influences how metro-cable stations along the route of Line J becomes critical, influences the friction of travellers when the volume of people gets too high. This pressure, and the lack of the systems capacity to transport even more people creates peak hours with a lot of people waiting in line, making the metro-cable stations critical points of contacts for the general metro-system. I interviewed Emmanuel Ospina, researcher at EAFIT University and now also working at the mobility office of Medellin explained that this is problem so important that the whole city might have to change. The working hours must be spread out since the capacity of the city's metro system can not provide the need for mobility for people, that citizens, and businesses has. He explains that:

"Another strategy is, like the schedule her is anachronic. We work all together at 8 am and we go back home at 6pm. So peak hours are unbelievable congested. In the metro, on the roads and busses, and everywhere. So we need to think about eeh, become a real main city. Because our schedule is like a small town. And a small town doesn't have 4 million persons. So the City, the business, commerce, the academy, the sectors.. All the economic sectors have to think about how they are will adapt to a new schedule format. And make, maybe a 24 hour city. Because it is easier for everyone. But this city close at 9pm." - Ospina, Researcher in Sustainable Mobility and Urban Transport/Part of the Urbam Team at EAFIT University. Working at the mobility office of Medellin (1.00.18)

Ospina talks about changing the whole rhythm of the city because of the serious problems of congested networks during peak hours. He says, that the city might needs to become a 24 hour City, and that all important sectors in the city needs to be involved in such transformation. This is a good example of how important these nodes of networks become for the whole city when the technology of the mobility network does not have the capacity to transport the amount of people that needs to go to work, to university, or to other important places, everyday.

Ospina explains that the capacity problems of the whole metro network of Medellin is especially important for the metro-cables, because they have the lowest capacity within the metro-system:

"So transportation is suffering.... Because it has to response in those specific peak hours and it has not any more capacity. And that is eeh, important especially for the cable cars which are the lowest, which has the lowest capacity." - Ospina, Researcher in Sustainable Mobility and Urban Transport/Part of the Urban Team. Working at the mobility office of Medellin 1.00.18

Ivan Sarmiento, senior researcher at Universidad Nacional in Medellin agrees with Ospina on how serious the capacity problems of the cable car is. But he adds that there are hours of the day where the system has no problems. He says:

"Line-J is arriving to incapacity.... It is especially in peak hours. Because there are hours where it is possibly not a big problem" - Ivan Sarmiento, Phd and senior researcher at Universidad Nacional de Colombia. Time: 8.58

Another researcher at EAFIT, Calderon, who grew up next to Line J, says that the system is completely collapsed during peak hours:

"You know in rush time the metro is completely collapsed. Its collapsed all the time. The long queues." Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (12.2)

Calderon also provided me with another perspective of how the metro-system is overcrowded, and how, even though you improve the capacity of the Line J, it would only increase the problems at the main line, Line A, that all the other mobility networks are connect to in the city. The main line that goes through Medellin and would, in his opinion, not be able to fit all the people. He says that:

"So apart from that. A system that is linear, and fed by, you know, perpendicular lines, just fit in people, thousands of people into a system that is linear, it doesnt

work. 14.17 Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (14.17)

In the map underneath you see how the other metro networks are connected to Line A, the blue line that goes through Medellin. The inter-dependence between the capacity of the different mobility networks, and especially the capacity of the main network into the other connected networks could have a great influence on how travellers experience the metrostations as critical points of contact in their daily travels, because of the density of people and the long waiting lines. The Metrocables Line J is the yellow line on the map, the orange line is Line B, that connects Line J to the main metro line, Line A (the blue one).

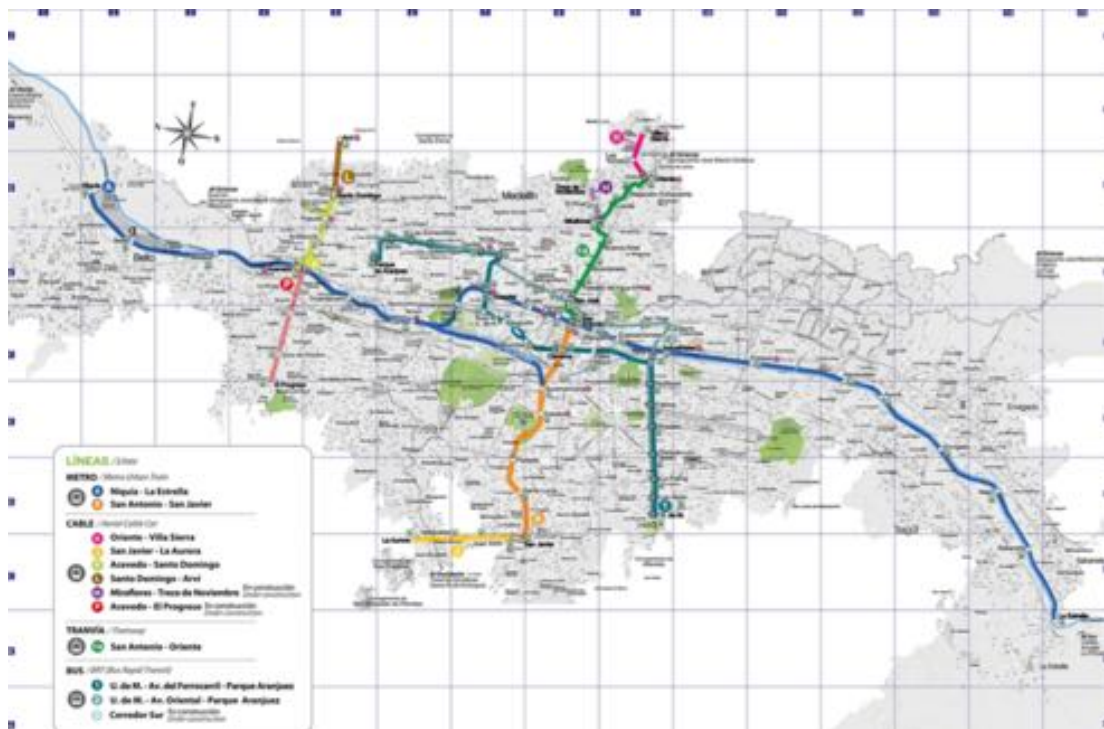


Figure 12: Map Of metro-system. Source: Mapametro:2020

7.2.4 Line J Connections – Creating CPC's

In this part of the analysis the transport networks that are related to Line J are investigated. How they are experienced to be connected with Line J and how some travellers might experience these connections to be critical.

The first traveller that i spoke with were exited about how Line J was integrated with the buses, and how it made her connected with the rest of the city.

"The connection between the metrocable and other transport routes from my point of view is excellent. The entire metro system and its integrated buses are very good and reach many places in the city" – Diana, 24, traveller.

Another traveller mentions the importance of how integrated the metrsosystem is, that you dont have to check in or out when you change from the metro-system to the metrocable. This is influencing the flow of Line J and makes the connection between the metro and Line J less critical. He says:

"Yea, you dont have to check in or check out again to step into the cable cars so eeh, its made well" – Olav, age unknown, backpacker and traveller with the Line J.

One person experience that the connections between busses and Line J are a problem, because sometimes, she has to wait a lot in between the two travels. The problems is not the tim cable cars though, but the bus connections. She says:

"The Service with the busses is really bad. Sometimes she has to wait for.... one hour and a half, and in comparison with the cable cars.... (where) you never have to wait longer than 2 minutes. It (the cable car) is really fast. You can always go in. But when it comes to the bus its always a problem..... - Maria Luz, age unknown, traveller with the cable car at La Aurora station. (Translated)

Maria experiences the bus conenctions as a problem and not the cable cars itself. She explains that:

... It is really long, that she have to wait one hour and a half, just to get the bus to the station and to her house. So its takes longer to wait for the bus than it takes to actually take the cable car and go downtown and do her things and come back" - Maria Luz, age unknown, traveller with the cable car at La Aurora station.

(Translated)

Apparently it takes longer time to wait for the bus at La Aurora station, than to actually travel with the cable car to La Aurora Station. The connection between busses and the metrocables at La Aurora is critical due to the time that you have to wait in between the connections, according to this traveller.

Another traveller mentions how the cable car itself is really good. But that the connection with the bus is a huge problem for him. And that he has to wait a long time at La Aurora station, which therefore could be said to be a critical point of contact. He says:

"The cable car is really good, and that you go really fast in, and that you are down close to the city center really fast. But when you takes to the bus it is really long just to wait for it. There are many different routes that parkes here, but his specific route has not arrived. He says it is really bad, he feel its really bad. And then he says. It doesnt work" – Julio, age unknown, traveller with bus and metro at La Aurora Station. (Translated)

One travellers have had the same experience of waiting a long time for the bus at La Aurora station: She mentions all the stops she has to do with the metro, when travelling from the Northern part of town, Niquia Station, to La Aurora Station. But still, the waiting time for the bus at La Aurora Station sounds to be the biggest problem for her. She says:

"Its very bad. Its terrible. They have to wait a long time just to get the bus. But she says that it is really bad and that she is been coming from Niquai. Yeah, she says she is coming from Niquia, so she has to stop in San Javier. Like in San Antonio then take San Javier then take the cable car and then come here, so its really like, a long" – Katalina, age unknown, traveller with Line J and bus at La Aurora Station. (Translated).

7.2.5 Weather Conditions Creates CPC's

The last part of this analysis focuses on the weather conditions as a factor that can influence the technology of Line J and thereby create critical points of contact at the metro-cable stations by making the system less functional, influence the flow of mobility, or force the metro company to stop the metro-cable car from transporting passengers. Here are an example of what happens when it is raining really, hard:

"Yes when it is raining really, really hard then it the cable car stops. Even when the cable stops or they close it for the rain..... prefer to wait until its good again, than take a bus, or like take another way of transportation to get down" – David + friends, age unknown, travellers with the cable car. (Translated)

And this also happens when there is a storm:

"The complicated is when there is a big storm and they stop it so people arrives to the metro connection and the cable car can't start so it accumulates a lot of people and that's the hard part but when is working normally, you see a big line but it evacuates fast." - Guillermo, traveller with Line J, Vallejuelos. (Translated)

These travellers explains that the metro-cable sometimes stop when its raining really hard, or when there is a storm. But that they prefer to wait until they work again because it takes so long time to get down to the city with other kinds of transportation. That it takes so long to go with other kinds of transport from La Aurora Station, only amplifies the perspective of how La Aurora Station relatively quick turns into a critical point of contact, when weather conditions gets critical.

Another perspective of how travellers have experience the connection between La Aurora Station and the busses as a critical point because of the weather, is this. Maria has to wait in another place than where the bus stops because it is not

possible to hide from the sun while waiting for the bus. She waits at the metro-cable station to stay in the shadow. She says:

She came to the shadow (at the metro-cable station) because the sun is really strong. And from here she can see when the bus arrives. So she wouldn't miss it" – Maria Luz, age unknown, traveller with the cable car at La Aurora station.
(Translated)

People that have to wait for other transport connections do not have a cover for the rain or for the sun, which is a problem, since the sun can be very strong. This problem is also mentioned as a general problem by the researcher from EAFIT, Calderon. He says:

"People have to wait in long queues outside the station even though it is raining or 30 degrees.... right now I think the system is quite collapsed." Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (12.21)

He mentions this in relation to how people have to wait in long line to get into the metro or other modes of transportation. Because these two problems gets worse.

7.2.6 Sum Up of CPC Analysis

This questionnaire illustrates that the prices of the metro is not perceived as an obstacle by many of the respondents. The queues in the peak hours and the time you have to wait for other connecting means of transport are more important or more critical for the flow of mobility with Line J. The people that were interviewed were interviewed at La Aurora station. The location of where the interviews were made could have been the reason for most of the respondents experiencing more critical mobility problems at La Aurora Station (55) than at San Javier Station (41). But, it could also be an indicator that the queues in peak hours and the connecting transport at La Aurora has a more critical character than at San Javier Station. But it could also be, that the connecting metro Line B

at San Javier is more reliable than the busses that picks up people at La Aurora Station, which could influence the experience of queues and waiting time for connecting means of transport. The maintenance of the metro-cable creates critical mobility situations because they close the system sometimes that it affects people a lot and makes their daily travel very complicated, because they have to use the busses to get to their destinations, which mean making more stops. The peak hour start from 4:30am in the morning and begins again at 4pm in the afternoon and makes the mobile situation very critical at Line J. It is worse at San Javier and La Aurora Station compared to Vallejuelos and Juan XXIII. The speed of Line J is reduced in the peak hours, and sometimes travellers have to wait 40-60 minutes at San Javier Station to enter the metro-cable. The capacity of the metro is not sufficient to transport the amount of people that are travelling in these hours which makes the metro-stations very crowded. They make a line with one group that needs to sit down where it takes longer time to get in, and one line with a group who are willing to stand up. These peak hours are stressing and uncomfortable for the traveller and some travellers cheat to get in front of the line, which creates frustration. The capacity problems of Line J and the rest of the metro-system are serious and might require a change of the whole rhythm of the city. The networks are congested during peak hours, which could be solved by making Medellin a 24-hour city, according to one of the mobility experts. The capacity problems are especially important for the metro-cables, because they have the lowest capacity of the metro network. Some argues that the system is completely collapsed during peak hours. Even though the capacity of Line J could be improved, it would only increase the problems at the main line, Line A. The connecting mode of transport functions well in the sense that Line J is well integrated with the rest of the metro-system. But waiting time for the busses at La Aurora Station makes the connecting point critical. The weather conditions could, in some cases, influence the mobility flow of Line J. The metro stops when it rains hard, or when there is a storm, and other means of transport are so slow that there are no other reasonable transport choices to go downtown when this happens.

8. Motility

The third analytical chapter of this project focuses on analysing the motility that Line J has created for the travellers living near to the four stations along the Line J route. Qualitative interviews were conducted at the four metro-cable stations. The data from these interviews are analysed by using the terminology and analytical perspective that the article *Motility: Mobility as a Capital** has given us. The analytical categories are divided into these six themes: Topography and access, access to the workplace, access and prices, disabilities and access, Line J effects on tourism, and Line J effects on business opportunities. The motility of Line J are analysed within these six analytical categories.

8.1 Topography and Access

Access in motility refers to the range of possible mobilities, but also the contextual constraints of these mobilities. Before Line J was built, the topography was a mobility constraint of the communities living in these areas. The topography has isolated the communities. Line J has de-isolated the areas and made it possible to travel quickly from for example Vallejulos to the North and south of the city, which makes the daily routines of the people living in these areas, much easier. One citizen explains how the area around La Aurora station were before Line J was implemented. He says that before Line J, there was only a road made of mud and nothing else:

"Has lived here for 9 years and before that, there used to be just a road here, made of mud and everything was really bad, and there were nothing here" – Miguel, 60 years, lives at La Aurora Station. (Translated).

So in exchange of a road made of mud, they now got a metro-cable to connect them with other parts of the City at La Aurora Station. At Vallejuelos, it is now

possible to go to the Northern and Southern part of Medellin. This traveller says that:

"Well it is a transport that helps a lot with the community. It facilitates the transport everywhere I mean facility to get to many parts of the city like centre or exclusive parts like Estadio. From pole to pole that you can go between Itagui (South) and Bello (North)." - Esteban Guitierrez, citizen and traveller with Line J, Vallejuelos. (Translated)

Line J connects Vallejuelos with both the North and the South of Medellin and to the exclusive areas. Being better connected is an improvement for the whole community. I interviewed Charles Chiro, an engineer who has works on improving conditions for people living in the informal houses in the area of Vallejuelos and the neighbourhoods around it. He explains that the neighbourhoods were topographically isolated before Line J was implemented. He says that.

We have worked quite specifically in the Santa Margarita neighbourhood, which has direct connection to Vallejuelos station. This neighbourhood was topographically isolated from the Metro until the car cable was built". - Charles Chiro, Civil Engineer at organization Build Change

So when the metro-cable station was built in Vallejuelos, the areas nearby, that were also topographically isolated, suddenly had access to the city.

One traveller mentions, how the access that Line J provide, is very important for his daily routines since it is quick and easy to travel with Line J.

"Very important (Line J for his daily routines) since I it is easier to mobilize and go to places quickly and easily." - Salomon, age unknown, traveller from La Aurora.

Another traveller explains how the topography makes it very difficult to travel up the hills of the informal areas, how it is not that bad walking down the hills, but that going up, is a big problem. He says that:

Because to go down is easy. The difficult thing is to come back. And walking I don't know hundred of hundreds of stairs." - Simone, working at a social organisation (La Cancha de la Parrilla) at Juan XXII.

The topographical conditions of the areas around Line J had created mobility constraints. Line J has provided mobility options that has helped de-isolate the areas and provided access for the communities to quickly go to South and North of the city, and solved the problem of people in the neighbourhoods having to walk up hundreds of stair to get to their home when go downtown. And that this is a very important help in conducting their daily routines.

8.3 Access to the Workplace

Next, we are going to look at how people experience that Line J has created easier access to go to work, and how important that is for them. The first traveller that is presented is a social worker, working in Juan XXIII. He explains that a lot of people that lives at Juan XXIII, does not have a car or a motorcycle, but they are going to work downtown, so they would have to walk to the metro-station in San Javier, if they did not have Line J. He says that:

"Because this cable helped them a lot. Because many of these people work in the city. And they have to come back everyday. And most of them don't have cars or motorbikes. So they just have to walk. So the cable car saved their life..., they are very grateful for it." - Simone, working at a social organisation La Cancha de la Parrilla at Juan XXII.

He explains how the cable car 'saved their life' and that people in the area are very grateful of Line J. One traveller from Juan XXIII agrees that it helps him move when he has to go to work, he says.

"The cable car is really good because it helps you to move, to transport. He uses it for his job. To go to work" - Emilio, age unknown, traveller with Line J, citizen at Juan XXIII.

This traveller says that he works in Itagui, in the Southern part of Medellin, and that the metro-cable connects him with better this part of the City, and that it is also really cheap for him to go there with the metro-system.

"It is easier to get to work. For example, he lives in Itagui, so its really cheap to get from here by the cable car and he takes the metro to Itagui." - Ovidio, 34, traveller with the Line j, interviewed at Juan XXIII. (Translated).

Line J makes it easier for him to go to work, and it is also really cheap. Calderon, a postdoc researcher from one EAFIT University says that the effect of the metro-cable are huge for all the people that works in the city's economical centre, Poblado, and at the same time lives in the poorer areas around Line J. He also says that a huge amount of people travel that route every day:

"So imagine the effect on the people that for example work here, in Poblado, there are here. There is a huge amount of commuters from that region, sorry, from that zone or area (where Line J is located), to this (Poblado) zone of the city that goes to work every day. And you can see the metro is packed." - Calderon, Postdoc researcher, EAFIT University. 08.02

And now, we move on to look at the prices of Line J, and if, or if not they represent a mobility constraint for the travellers living at Line J stations.

8.4 Access and Prices

The access that Line J provides for the citizens living close the stations could be limited by the costs of the trips. Line J is located in an area of low income families, so the prices of Line J might function as a mobility barrier that makes it difficult to benefit from the mobility capital that it potentially provides for the people living nearby. These three travellers say that it is very economic and fast, and perfect for a normal budget:

"It is very economic, very fast. You get everywhere really fast, because by bus it would take longer." - Jennifer, traveller with Line J, Vallejuelos. (Translated)

"It is a saving that you make, because it is cheap, economic and it transports you fast to wherever you want to go." - Yeison. Traveller with Line J. Vallejuelos Station. (Translated)

"I think the prices are good. It is perfect for a normal budget." - Salomon, age unknown, traveller.

One tourist that I interviewed agreed that the prices were low. He said that:

"It's easy and cheap" - Olav, age unknown, backpacker and traveller with Line J.

The prices for transportation are important, since they could represent a mobility barrier for the low – income families. And according to the mobility expert, Ivan Sarmiento, there is a clear necessity to connect people to the massive transport system in the poorer areas:

"Because in poor territory there is more clear necessity (than other areas in the city) to connect people with the massive transport system" - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia

Even though the prices for travelling with Line J are low, according the people I spoke with, Sarmiento explains how some people, if they don't have enough money, have to go down the hills and take the busses instead of the metro-cable, because the bus-drivers avoids the rules, and give the poorer people a lower price. So for some people, the prices could represent a mobility barrier, which excluded people to only use the busses, if they are lucky that the driver will help them. He says that:

"Some days people possibly don't have money to pay the cable car. Then people have to use busses. Because they can talk to the driver of the busses. And then they, the driver buss can reduce the price". That the social conditions of this.....Especially with people that are poor. The driver is conscious of the situation. And they reduce a little bit....The machines don't have feelings. Then the driver bus can reduce a little bit. For example if you have you dint have 2500 pesos, but only 1500 pesos, the "you can drive me for 150? Yes go up"- Ivan Sarmiento, PhD, senior researcher at Universidad Nacional de Colombia (1.06.44)

The prices are experienced as low, and not as a mobility barrier, also, it could be possible for the people who can not pay the 2000-2500 pesos to pay less, by travelling with the busses. The metro-cable could be said to represent a formal mobility system where prices are not negotiated, and therefore could be a mobility barrier, and busses represents, a more informal way of travelling, where humans takes the final decision about the prices of mobility, and therefore is possible to negotiate.

In a bigger scale, Line J has been successful in making mobility possible for the poor people living at the Stations of Line J, according to mobility expert Ivan Sarmiento. He says that Line J have been successful in combining a social solution with a mobility solution for the poor:

"The successfully of the cable cars has been to connect the mobility solution with the social solution.... And to the mobility of poor people" - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia (31.05)

And now we move on to looking at how mobility access to the areas where Line J metro-cable stations area, has influenced the safety, which is something the citizens experience as beneficial, and as an asset.

8.5 Disabilities and Access

When analysing how Line J influences the motility of the people living in and around the areas of the metro-cable stations, competences is one of the key-factors to look at. Competences are described as skills and abilities in relation to mobility. In this part of the motility analyse how Line J has helped people with physical disabilities to be able to move around the city, connecting them to the rest of the city's mobility network, and, how they experience this. This traveller, Oscar Murillo, living at Juan XXIII, only has one leg, which means he has to travel with the Line J in his wheelchair. He explains that he just have to report it to the people working at the stations when he enters Line J, and then someone will be waiting for him to help him out again, when he travels with the metro-cable:

"If you're gonna travel with a wheelchair you report that you're going into the car and the name of your stop so they wait for you there and help you out or in the car...The police officer helps me to get out, the people around me help me as well or other foreigners as him (me)... If I have to go the hospital then I take the cable car and, I go in, and they help me out at Prado station." - Oscar Murillo, 68, traveller with Line J, Juan XXIII, he only has one leg so he moves around in his wheelchair. (Translated)



Figure 13: own picture: Funck 2020

Picture taken outside Juan XXIII station of Oscar Murillo. He travels with the cable car when he has to go to the hospital or other destinations, and the people working at Line j helps him in and out the metro-cable)

John who is 71 and lives at Juan XXIII metro-cable station explains how the people that are working at the Medellin Metro, tries to socially include people with disabilities such as walking problems into their transport system, using a lot of resources to make it comfortable for people that does not walk too well:

"Rune: But you have a walking problem?"

John: Yes I had a little operation. They make a cut here – (shows his knee)

Rune: How is it then travelling with the cable car? Is it comfortable for you or?

John: Yes it is comfortable because all the people that are working around the cable are very nice. If I need help they come.

Rune Ah, so there is someone to help you with any problems?

John. With any problems. And in the metro too." - John, 71, traveller with Line J, living at Juan XXIII for 5 years.

I spoke with Charles Ciro, a civil engineer who has been working on improving this areas around Line J. He says that the metro-cables facilitates transport for people that earlier had to be carried down the steep hills by their family members to get access to the busses. And that the busses only went to the city centre at that time, before Line J was there:

In the social aspect, the metro-cable lines facilitated the transport to people with disabilities, who previously had to be carried by their family to access the buses that only went to the city centre". Charles Ciro, Civil Engineer at organization Build Change

One of the operators working at Line J that I interviewed explained how they take care of the people with disabilities and that there is always someone to help you:

"Yes, Disabilities. There are always taking care of them, like, if someone needs to be helped getting down of the cable car they can announce when the person get inside the cable car, and then, they are waiting for them on the way up, and, so there is always someone if you need help, you can, he has taking care of you if you have any trouble" - Carlos, operator at Metro of Medellin

The mobility constraints for people with disabilities living around the metro-cable stations does not necessarily result in less access to the metro system, and the metro-cable Line J. People experience that they get a lot of help to get in and out of the metro-cable, and the people that works at Line says that they do a lot to help people with disabilities getting access to the system, and thereby making sure that the motility if people with disabilities travelling with Line J are not limited in their mobility capital.

8.6 Line J Effects on Tourism

In this part of the analysis we focus on how access to the areas around Line J metro-cable stations from other parts of the City, has created more increased the tourism. This analysis focuses on how people in the area experience to benefit from these activities that Line J has created, or in other words, how they experience to capitalize from the mobility capital that Line J provides for people from other parts of the city, or from other parts of the world, going to their neighbourhood because they are now having access to the areas, and because the area now has a different symbolic status.

Tourist from all over the world now goes to experience the area after the cable cars were implemented. One taxi-driver says that:

"It is better now. There are a lot of tourists. From the whole world. There are tourists from Europe and United States. There are almost always something to do here now" - Erdnan, taxi-driver, living in San Javier for 32 years,

The taxi-driver has more to do at work now because of Line J. And not only the symbolic status of the area has changed, so that it attracts tourist from other parts of the world, both also other Colombian tourists are now going to the area to see the changes that has happened:

"Yes of course. There are Colombian tourist as well. You can see how many that are here. And then come from all parts of Colombia. Also Bogota." - Erdnan, Taxi-driver. San Javier.

Ospina, a mobility researcher from Medellin, explains how you see tourist from all over the world now, taking pictures, spending money:

So you can see tourists everyday, any day, in the cable car buffer. So you go to San Javier or Santo Domingo and you walk around, and you find Argentinian people, Americans, Europeans. Drinking coffees, taking pictures with cameras." - Ospina,

researcher in Sustainable Mobility and Urban Transport/Part of the Urban Team. Working at the mobility office of Medellin (28.48)

John, an operator working at San Javier Station for the Metro of Medellin explains how the tourism that are generated by the physical interventions such as Line J are associated with positive change in the area, and that it has made the area more safe. He says that:

"Yes. I have lived here since 5th grade and i am 32 years old today. The area as been through a huge change since the time i arrived here. Now, it is full of tourists and the streets are safe." - John, Operator of Medellin Metro at San Javier Station.

Oscar Murillo agrees, he says that the neighbourhood are full of Europeans and Colombian tourists:

"This neighbourhood is....full of Europeans and people from Choco, Venezuelans, Costonians (from the cost)..." - Oscar Murillo, 68, traveller with Line J, Juan XXIII, he only has one leg so he moves around in his wheelchair. (Translated)

At La Aurora station there are a platform where tourists and people living in the area can enjoy the view. It attracts many people and it has made a lot of positive change in the area according to Edwin:

"A lot of tourist come here especially to this.... viewpoint there... It is really nice to have the cable car close bythe cable car for sure has changed a lot in this area." - Edwin, traveller with Line J and working in a store at La Aurora Station. (Translated)

But not all the metro-cable stations along the route of Line J benefits from this equally. Juan Arias, a citizen living at Vallejuelos explains that his neighbourhood is not a big tourist attraction, like La Aurora Station, and that Vallejuelos is located in a hole where not a lot of visitors that are using the metro-cable wants

to stops. So not all the metro-cable stations benefits equally from this tourism that Line J has generated:

"Yes, because let's say this is not a big neighbourhood and it is not a tourist attraction. Is not like la Aurora, it is a periphery so people visit it a lot here because it is like a hole, not many people visits it, I mean people come to transit on the cable car to go to their destinations work or home." - Juan Esteban Murillo Arias , 21, Vallejuelos. (Translated)

The neighbourhoods around Line J seems to benefit from all the tourism around the metro-cable, because now the streets are safe, and the physical interventions are associated with this social transformation. But not all the areas around Line J benefits equally. Vallejuelos is not as visited as La Aurora Station for example, because it does not have a viewpoint and is located further down the hills.

8.7 Line J effects on Business Opportunities

The third key factor in analysing motility is appropriation. Appropriation refers to how agents act and interpret upon perceived or real access, which is what is analysed here. Appropriation is formed by people's needs, plans or aspirations. In the following interview we see how Maria, a woman who works in a informal shop at La Aurora Station, travels to La Aurora from Belen, a pretty centrally located area in the city, to be able to work. She does it, not only because of all the potential costumers that passes through the area because of Line J, but also because of the informal environment that makes it able for her to sell stuff from here small move-able store.

Maria Lee uses the metro-cable car to travel to La Aurora because of the opportunities of work. She is very satisfied with the service of the cable car. Also, she explains how all the movement around the station increases the business opportunities compared to Belen (a middle-class area centrally located in Medellin). Also, it is not possible to sell stuff from the informal cars like she does

at La Aurora, in Belen. So the informal environment at La Aurora gives her the opportunity to do informal work, as well as the movement and activity of people that are coming from Line J at the station, are making the business better. She says:

"She has been here for like a week. But she lives in Belen.....it is really good to have the cable car here because its really easy to go back and on the way up... There are a lot of commerce and a lot of people passing by. And also that its more like movement here than in Belen because, Belen is more like home place like more...residential.... Here is more movement and you see more people all the time.... in Belen you can not take out these, like cars just to sell things."... – Maria Lena, working at informal store at La Aurora Station. (Translated)

When I asked her about why she could sell things here from her car her at La Aurora Station and not in Belen, she said that it is because the area here at La Aurora Station is more informal:

"Yea informal. You can not do it (in Belen). And here its possible.... she came here because she does not have many opportunities, so someone offered her to cover, so she decided to go." – Maria Lena. working at informal store at La Aurora Station. (Translated)

The mix of informal business environment and the movement of people in the area created by the Line J, makes her travel to La Aurora because of her better business opportunities.

Another person, Andres, who works in a formal shop across the street at Line J Station at La Aurora, explains how he moved to this area from another city to get more opportunities in his life. He says:

"Andres used to live in Neqolui. Its like in Uraba, so its more close to Choco and that area, but it is still being Antioquia. But he moved here like for more opportunities and to study." Andres. Works at La Aurora at a formal shop. (Translated).

Luis, who lives at Juan XXIII explains that before Line J opened he had to find work outside his neighbourhood, but today he is able to work here, in the area where he lives:

"Now, he hasn't worked outside (of the area) since the cable car started. He said he just started working at his place. He works from here so he does not need to work for a company or he does not need to work for someone else." - Luis, 51, shop owner at Juan XXIII.

Isabella, who work in a formal store at La Aurora Station says that the Line J is really good for her business:

"For the business it is really well." - Isabella, age unknown, working in a formal shop at La Aurora Station. Translated).

She says that without Line J there would be no business opportunities here, people would not go to the area, not event the locals:

"Without the cable-car all the commerce in this area would not be possible. Because mostly people start coming here just to visit. Even locals didn't know this area but they are coming now to see what's happening and a lot of people come here to live or work." - Isabella, working in a formal shop at La Aurora Station. Translated).

Line J has influenced people's dreams, ideas, or actual possibilities of making business in the areas. They can find jobs or work inside their own neighbourhood. It attracts people that want to find work around its stations, and it makes the people that already live in the neighbourhoods able to work inside their own area instead of being forced to go downtown to work. And in that way, they are able to capitalize on the mobility capital of Line J, and their aspirations and actions are influenced by their mobility options that Line J makes possible.

8.9 Sum Up of Motility Analysis

The motility analysis focused on how citizens living at the four stations along the route of Line J, experiences to capitalize on the potential mobility capital that Line J provides. We used the terminology from the three key-factors in the theoretical concept of Motility, access, competence, and appropriation to analyse these citizens experience of being able to benefit from being mobile with Line J. Access was investigated in the analytical categories: 'access and topography', 'access to the job' and access and prices'. Competencies were investigated in the analytical category 'disabilities and access'. And

Access and Topography

We analysed how Line J has removed the topographical problems of mobility along its route and has provided access in an area where topographical issues made it difficult to travel to the centre of the City, or even go anywhere. The topography worked as a mobility constraint of the people that were living in and around the Line J before it was build. Line J has provided mobility options that has helped de-isolate the areas and provided access for the communities to quickly go to the South or the North of the city, and solved the problem of people in the neighbourhoods having to walk up or down hundreds of stairs when they had to go downtown or back to their homes again.

Access to the Workplace

We analysed how Line J made it possible to go to work for people living at one of the four stations. Many people does not have a car or a motorcycle, but they work downtown, so they would have to walk to the metro-station in San Javier to get access to the City. Line J connects people that live in one of the investigated areas to their workplaces.

Access and Prices

The prices on Line J are experienced as low, and not as a mobility barrier. But contradictory to the busses, the metro-cable represents a formal mobility system

where prices are not negotiated, and therefore, prices are in some cases a mobility barrier. A more informal way of travelling, where it is possible to negotiate the prices, are the busses. But in general, Line J have been successful in combining a social solution with a mobility solution for the poor.

Disabilities and Access

The analysis of Competences in the theoretical concept of motility, includes the focus on how the ability to physically move influences actors possibilities of capitalizing on Motility. We analysed the potential mobility constraints for people with disabilities that live nearby the metro-cable stations. The people that we spoke with, explained that their disabilities did not necessarily result in less access when they were travelling with metro-cable Line J. The travellers with disabilities experienced, that they get a lot of help to get in and out of the metro-cable, and the people that works at Line J does a lot of work to help people with disabilities getting access to the system. Thereby, they were making sure that the motility of people with disabilities that are travelling with Line J are not limited, in capitalizing on the potential mobility capital of Line J, even though they have physical disabilities.

Line J Effects on Tourism

The symbolic status of the area has changed with after Line J was implemented and now the areas attract tourist from other parts of Colombia, but also people from around the world. from other parts of the world. The tourist spend money in the areas which is good for the economy. The physical interventions are associated with positive change in the area, and that it has made the area safer. The neighbourhood around Line J seems to benefit from all the tourism But not all the areas around Line J benefits equally. Some of them, like Vallejuelos – the third metro-cable station of Line J, is less than for example La Aurora station. At La Aurora station people can enjoy the view of the whole city, which is not possible at Vallejuleos.

Line J Effects on Business Opportunities

Line J has generated business opportunities at it the stations. This has made some people travel from other neighbourhoods in the City, to the earlier socially

excluded urban area at la Aurora to work, since informal work is possible, and since it is a good place to do business because of the flow of people that Line J has generated. The activity of all the people that travels with Line J, are making the business opportunities better. And today, some of the people that live in the neighbourhoods around Line J metro-cable station are able to work in the area where they live, instead of being forced to go downtown to find work.

9. Gentrification

This analytical chapter focuses on gentrification and displacement of people the areas located at next to the four metro-cable stations San Javier, Juan XXIII, Vallejuelos and La Aurora caused by Line J. The analysis focuses on how the house prices of the properties have increased due to the effects of Line J and how these affects the people living in the areas around the stations. We also analyse how this has caused new houses, and new buildings to be build and how this, according to some, has expanded the informal settlements around the stations as an effect of the infrastructure that Line J provides. The analytical categories of this chapter are: Increase of house prices, potential return on capital investments,

9.1 Increasing House Prices

First, I tried to collect information about the price development of the houses around the metro-cable stations since 2008 when Line J was implemented. It was a difficult investigation since many of the people that I spoke to, were not able to help me with any information, or data, of what have happened. The houses in between San Javier and La Aurora are informal settlements, which means that they are more or less illegal settlements, and therefore data about houses prices in these areas are not registered. One of the first people i spoke to was Line Gonzales who works for a real estate company called La Lonja de Propiedad in Medellin. She said:

"We have not information on prices on the area because most of the constructions are non-formal, so they have never been registered in any notary office or the registration department." - Lina Gonzales, Real Estate Agent at La Lonja Propiedad.

The real estate agency, La Lonja de Propiedad, says that there is no registered information about the price development of the houses in these areas, because the houses are informal settlements. The new houses that were build right after Line J was implemented at La Aurora Station, called Villa Suramericana, are not informal. But according to La Lonja Propiedad, Villa Suramericana, can't be sold because they were assigned to people by the government. They say:

"Villa Suramericana that were living units assigned to low-income people by the government. It turns out that we don't have any information about those either, because they can not be sold or rented to anyone, but the person who was assigned to in the first place" Lina Gonzales, Real Estate Agent at La Lonja Propiedad.

So according to this real estate company, the new houses called Villa Suramericana located at La Aurora could not be sold. But later, I spoke to one citizen who lives and works in the area close to La Aurora, who said something different

... And the prices of the houses has risen a lot so now its more expensive to live here. And the quality, like the social stratification has risen as well, so now it is 3, before it was 1 or 2. Because of the (new) buildings and the cable cars." – Isabella. Working in a formal shop at La Aurora Station. (Translated)

Isabella, who works a lives at La Aurora Station says, that the house prices has gone up and the public social stratification of the houses has changed in the area as well. From being at level 1 or 2 before, to now being at level 3, which means that people who live there have to pay more for public utilities. Villa Suramericana were build right after Line J was implemented, which makes it difficult to compare the situation now to how it was earlier, when it comes to the

increase of house prices. But according to Isabella, the reason why the public stratification of the houses has gone up, and the house-prices has gone up too, is the implementation of Line J. Underneath, a table show the percentages of how many houses that are classified within different levels of stratification in Medellin. The table are from 2014, but still, it illustrates how they are classified very different from each area, and gives the reader an idea of the socio-economic stratification system in Medellin. The average stratification of houses in the neighbourhood Robledo, where La Aurora metro-cable station is located, was 2.41 in 2014.

Comuna/Municipality	Estrato						Average Estrato
	1	2	3	4	5	6	
El Poblado	0.0%	1.7%	1.5%	3.8%	18.7%	74.3%	5.63
Laureles/Estadio	0.0%	0.2%	0.9%	35.4%	63.6%	0.0%	4.62
La América	0.0%	2.2%	30.7%	43.3%	23.9%	0.0%	3.89
Candelaria (El Centro)	0.0%	7.4%	32.9%	56.0%	3.8%	0.0%	3.56
Belén	1.8%	16.9%	36.1%	23.9%	21.2%	0.0%	3.46
Envigado	1.6%	19.2%	39.7%	17.9%	19.2%	2.4%	3.41
Guayabal	0.6%	17.0%	56.1%	26.3%	0.0%	0.0%	3.08
Castilla	1.0%	12.2%	85.5%	1.2%	0.0%	0.0%	2.87
Buenos Aires	3.3%	25.2%	60.3%	9.5%	1.1%	0.6%	2.82
Sabaneta	1.2%	30.9%	54.6%	12.6%	0.6%	0.1%	2.81
Itagüí	6.3%	40.2%	50.8%	2.8%	0.0%	0.0%	2.50
Aranjuez	11.0%	34.4%	54.6%	0.0%	0.0%	0.0%	2.44
La Estrella	6.6%	53.0%	33.5%	5.5%	1.2%	0.2%	2.43
Robledo	11.2%	48.2%	30.8%	8.4%	1.4%	0.0%	2.41
Copacabana	4.4%	59.0%	33.5%	1.6%	0.9%	0.7%	2.38
Bello	21.2%	37.9%	36.6%	4.2%	0.0%	0.0%	2.24
12 de Octubre	15.2%	58.5%	26.3%	0.0%	0.0%	0.0%	2.11
San Javier	35.0%	40.4%	22.3%	5.2%	0.0%	0.0%	1.96
Villa Hermosa	34.6%	39.1%	24.2%	2.1%	0.0%	0.0%	1.94
Manrique	26.3%	58.4%	15.2%	0.0%	0.0%	0.0%	1.89
Santa Cruz	13.4%	86.6%	0.0%	0.0%	0.0%	0.0%	1.87
Popular	63.0%	37.0%	0.0%	0.0%	0.0%	0.0%	1.37

Percentage of housing by estrato in comunas in Medellin and municipalities in the Aburrá Valley, 2014

Figure 14: Social stratification. Source Medellinguru:2020

(Table:2. Source: MedellinGuru: 2020)

This table show how the percentages of the houses located in different neighbourhoods in Medellin are classified from 1-6. The people living in houses that are lower in the classification system pays less for services like water and electricity. So when the stratification goes up in the area, it gets more expensive to pay for public services in the area. Line J has caused Villa Suramericane

located at La Aurora metro-cable station, to increase in level of stratification from level 1 to level 3, according Isabella, who lives and works near to the station.

At Juan XXIII the house prices has also gone up. Ovidio, who lives at Juan XXII says that that before the Line J was implemented the houses were worth almost nothing. But after Line J was implemented the house prices and the land property has increased a lot. Everything has increased a lot. He says:

"Everybody in the neighbourhood would say that before the cable cars, all the houses were not worth anything. Now it is like the value of the houses has increased a lot. The house prices and all the land property. The prices and everything has increased." - Ovidio, 34, traveller with the Line j. Juan XXIII. (Translated).

In San Javier I have spoken to two taxi drivers. One, who had been living in San Javier for 28 years, and one, who had been living there for 32 years. They said about the prices of the houses:

"Yes, (the prices have gone up), after the cable came, have risen a lot. It is more attractive to live her now. And people are happy to live here now." – Dubian. Taxi-driver, San Javier.

"Yes, they have gone up. But are they are expensive? It depends which apartments we are talking about. When they are closer to the station they are more expensive." – Erdnan. Taxi-driver. San Javier.

These statements show that the house prices have gone up in San Javier, and especially around the metro-cable stations. Expert researcher in gentrification and displacement, Calderon, says that the increase of the house prices, are some of the negative side effects of Line J. That the stimulation of local businesses caused by Line J are increasing the value of properties with up to 2-3 times, compared to before Line J was implemented. The results of this increase have

been, that some people had to leave the area, because the landowners started to take advantage of the situation. He says:

"But on the other side of the coin, ah, this ah, stimulated the creation of local businesses... When you start digging a little bit deeper, what is going on in the neighbourhood, you start seeing that... like a stimulation of local businesses and, is increasing the values of the properties, right. So you can see for example in Comuna 13. In one of the last visits that i had there, that properties increase 2 or 3 times the price they used to have before the interventions. But also, theses businesses went away, when landowners started taking advantage of them." Calderon, PhD, researcher in gentrification at URBAM, EAFIT. (14.17)

Calderon explains that the flow of tourists that Line J has generated were one of the factor that caused the increase of the prices:

So, if you are the owner in one of these houses where in front of your house there is some new infrastructure.... you start seeing that you can immediately benefit because you are going to have a flow of tourists all the time". Calderon: Postdoc researcher in gentrification at URBAM, EAFIT (14.17).

These conditions have created gentrification in the area and displacement for some people, according to Calderon. He says that some people could not afford the new rent of the properties, after the landowner took advantage of the situation.

"So many people have, this is gentrification, many people have to displace themselves. They have to move, because they could not afford the new rent. Right. Many people are taking advantage of this kind of situation" Calderon, Postdoc researcher about gentrification at URBAM, EAFIT. (18.21)

Calderon calls what happens at Line J for "micro-gentrification". He says that it should be prioritized as a serious problem, because even though Line J is a solution to some problems, at the same time, it creates other problems, referring

to the people who have to move away from the stations because they can't pay the increased rent. He says:

"And I called it micro-gentrification, just to give a name... It should be priority, because you are solving a problem that are creating others. - Calderon, Postdoc researcher about gentrification at URBAM, EAFIT. (20.01)

Calderon explains the difficulties of preventing gentrification processes that happens when building new infrastructure, the dilemma of solving one problem but at the same time creating another. And the problem, that it is very difficult to spread the resources equally, that the infrastructure generates, to the individuals that live in the area. He says:

How are you going to protect that population from theses processes.....How can you spread it equally. And I do not have the answer to that. I am just telling you. Maybe you, when you are thinking about this problem, you can start thinking about possible solutions you know. How can it be spread. To not only the people who have the house in front of the station get benefit, but the not the rest of the population. I do not know. I do not know the answer to that. - Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (20.01)

In contrast to what Calderon explains, Civil Engineer Charles Ciro, who works in the informal areas, trying to improve the living standards of the people living in the informal settlements, says that he has not experienced displacement as a significant problem. That it is true, that the prices has gone up, but that people with higher purchasing power are not interested in investing in the areas because of its historical association with people of lower income. One exception though, is the area where the new houses are built at La Aurora Station. He says:

"I think gentrification for Line J is not very excessive, it's true that rent price has gone up significantly, though it have not cause relevant displacements. I think that's because neighbourhoods are historically "of low resources", then people with greatest purchasing power don't buy houses there. The exception for this is the

area near to Aurora station, where a lot of houses projects were build (these are not informal). Charles Ciro, Civil Engineer at organization Build Change



Figure 15. Funck:2020. Own picture. Inside Line J

Picture to the left taken of the informal houses close to Juan XXIII station. Picture to the right shows the new houses that were build after Line J were implemented called Villa Suramericana. Villa Suramericana is located at La Aurora Station. The picture shows the contrast between the two different areas that are located near to each other.

9.3 A Potential Return on Capital Investment?

One of the elements of gentrification is when investments are made in urban areas with the intention of capital return. When Line J was implemented in 2008, a lot of people thought that the land around the stations would be a lot more worth and decided to invest in the land. But Line J also caused an expansion of new informal houses in the area, because people wanted to be sure they could benefit from the infrastructure of Line J. According to Ospina, many people constructed houses at the empty areas around the stations, so that they could rent it or sell it. He explains that.

"A lot of people wanted to live there because they think that it is,... they think that when there was a cable car the land would be a lot more expensive....I know that

for example, there was an empty land, an empty 'lote' (Spanish for land). You make some... Construction and then you sell it. And with the cable, a lot of people made that. And then they began to rent the land there. Because they were waiting the prices to go up. But informality is expensive in Medellin... So, even without paper, even without legal lands you have to pay good money." - Ospina, researcher in Sustainable Mobility and Urban Transport/Part of the Urbam Team. Working at the mobility office of Medellin (39.06)

Ospina explains another problem that Line J has caused, is that it has 'allowed' people to live, or make business in these areas that were actually illegal and informal settlements. Line J has provided access for people to go there, live there, travel forth and back on a daily basis. The cable car allowed the construction of new houses in an illegal area, a sort of gentrification in an illegal area, which has resulted in, according to him, that the informality grew. He says:

"That's the problem with the cable cars. They allowed people to go there. Because, before the cable cars, you could not get there. You could walk there. But you could not get there daily. Work in Medellin and live there: It was impossible, and it was impractical. With the cable car you can get there. So once you can get there you make a business there. And people go there. And the cable-car allows that. I think cable-cars promotes that. The informality grew". - Ospina, Researcher in Sustainable Mobility and Urban Transport/Part of the Urbam Team. Working at the mobility office of Medellin (43.46)

Ospina argues, that Line J is 'allowing' a form of expansion of illegal and informal gentrification. And, that it is a problem, that it is not taken seriously in Medellin, because the people of Medellin are blinded by the success of the metro-cables in the city. He says that:

They are allowing It..... And you can get there, because you have the cable car.you have to think about what the future problems will induce with that solution (The Line J). And I think too few persons are thinking about it. Because they are too happy with the success of the cable cars." – Ospina. Research in Sustainable

Mobility and Urban Transport at Eafit. Working at the mobility office of Medellin (46.47)

Civil Engineer Charles Ciro says that it is clear that Line J has improved the accessibility to the area, and that it has generated a reconstruction of some of the homes around Line J, like in Vallejuelos. Also, that Line J was one of the factors that accelerated the construction of Villa Suramericana at La Aurora Station. He says that:

Regarding the construction of the Metro system, it is clear that it improved the accessibility to transport and generated the commercial recovery of the homes near the stations, notably improved the road infrastructure of some neighbourhoods (such as the Vallejuelos and Santa Margarita neighbourhoods) and It was one of the factors that influenced the accelerated construction of new homes (especially in the area of Robledo - La Aurora)." - Charles Ciro, Civil Engineer at organization Build Change.

And now we sum up the analytical parts of this chapter to get an overview of what have been analysed.

9.4 Sum Up of Analysis of Gentrification

At San Javier, Juan XXIII, Vallejuelos and La Aurora metro-cable station, the house-prices, and prices for land property has gone up. At La Aurora Station the classification of the social stratification has also gone, which means that public utilities are now more expensive in the apartments. The value of properties are with up to 2-3 times at some of the stations, which has resulted in people had to leave the area. The flow of tourist has generated the increase of the prices and displacement for some people. Even though Line J is a solution to some problems, it is, at the same time, generating others. It is difficult to prevent these dynamics, though, and to make sure that the value generated from Line J is spread equally to the individuals that live in the area. According this problem of

gentrification is not significant, since the area is not attractive to people with great purchasing power, because of its historical associations with poverty.

After Line J was build, a lot of decided to invest in the land because they thought that the land would become more expensive over time because of Line J. A lot of people chose to build houses at the empty areas around the stations so that they could rent it or sell it. It could be argued that Line J allowed a form of expansion of illegal and informal gentrification. At least, it is clear that Line J has improved the accessibility to the area, and that it has generated a reconstruction of some of the homes around Line J. And that it was one of the factors that accelerated the construction of Villa Suramericana at La Aurora Station.

10. Military Urbanism

In the previous four analytical chapters this project has analysed the travellers experiences of materials, CPC's, motility, and gentrification of Line J. In this part of the analysis we try to investigate, how Line J could be seen in as a form of military urbanism? To investigate this, we started by looking at the historical context of the area where Line J was implemented and how the implementation of this innovative infrastructure could be seen in the perspective of the ideas within New Military Urbanism. We begin by examining some of the violent events and extreme societal conditions that have previously characterized the peripheral urban are of Western Medellin, and which have largely shaped the historical narrative of San Javier, Comuna 13, where Line J was implemented in 2008. Many agree, (Davila el al: 2013) (Ospina: interview: Time: 18.11), that Line J has worked as a social intervention that has provided access to the city, and improved the social inclusion of poorer areas in Medellin. But with theoretical view borrowed form Stephen Graham's book '*Cities under Siege*' (Graham: 2010) about new Military Urbanism, we are able to view this intervention in another perspective. New Military Urbanism focuses one how government uses threats coming from outside and within borders of modern societies to legitimize

intense surveillance of the civil society. It focuses on how cities, public spaces and infrastructure are seen as battle-spaces for a low-intensity war. Even though the violent events that earlier occurred in this area could not be formulated as 'low-intensity war', but rather actual war, the area of today is peaceful, while the surveillance and military presence of the area continues to be strong. To answer the question of 'how Line J could be seen in as a form of military urbanism?' This chapter has investigated the FARC and the Paramilitary Groups at one point had taken control of Comuna 13, how the government took back control by force during Operation Orion, how Line J works as part of a intense surveillance strategy in the area today. We also look at the strong military presence in the areas along the metro-cable stations, how the nearby military base is connected to the metro-cable stations. Finally, we analyses how travellers and citizens living near to the metro-cable stations are experiencing this for of security.

10.1 FARC and Paramilitary Groups in Comuna 13

In the first part of this analytical chapter, we look at how FARC (Revolutionary Armed Forces of Colombia), Paramilitary groups operated and had taken control of Comuna 13 before Line J was implemented in back in 2002. Before 2002, when Line J was implemented, urban militias of the revolutionary Armed Forces (FARC) and People's Armed Commandos (CAP) operated and had taken control of the neighbourhood. There was a war going on in the neighbourhood. And you could not enter the area without great danger. The Human Rights organisation PBI Colombia describes San Javier as one of the areas with most conflict in the Antioquia capital, Medellin.

"Urban militias of the Revolutionary Armed Forces of Colombia (FARC), the National Liberation Army (ELN) and the People's Armed Commandos (CAP) which operated in District 13, which was at the time one of the most conflict ridden areas in the Antioquia capital." (PBI Colombia: 2017).

Calderon, researcher at Eafit University in Medellin, explains that it was a very difficult time in Comuna 13, because the paramilitary groups were taking the territory by force, that it was a war. He says that it was a horrendous time, and that shootings with heavy weapons made this a big problem for the whole city.

"I was still living in Colombia. That was a very difficult time for the Comuna 13 because it was the time when the paramilitary groups were getting to the territory by, you know, by war, by force, so yeah, that was horrendous, it was horrendous. I mean the shooting with big guns. I mean I am not just talking about here (Comuna 13), I am talking about a big deal in the city. It was horrendous." - Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (2.23)

Ivan Sarmiento explains the situation, and says that the area was very dangerous at that time, and that without a permission to enter the area, you would get killed if you tried to go in:

"No, that was not possible. It was dangerous... If you, if you... didn't have a, a pass or a..... a permission to enter.... You couldn't enter to this territory. Because (then) you were a dead man." - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia. (21.57)

He explains that in the beginning the guerrilla groups (FARC) had control of the area, but later, the right wing paramilitary groups confronted FARC. He says:

"In the beginning it was the guerrilla. Then appeared the paramilitaries. Then the paramilitaries confronted the guerrilla and they were fighting for the control of the territory." - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia. (22.52)

An internal war between two violent military groups caused this situation where people could not enter the area because of the government's incapacity to create safety in the streets of the area for its citizens. Calderon explains how the area has changed completely since 15-20 years ago. He says that Juan XXIII, was really

difficult to enter when Line J did not exist, because of the militia in the area:

But at that time, I mean, I have seen the whole change of that area. So for example Juan XXIII, I have been, I was there 20 years ago, 15 years ago, when this cable didn't exist. It was a completely different story. And Juan XXIII was this area that was quite difficult to get, because there was a lot of militia around there." - Calderon, Postdoc researcher about gentrification at URBAM, EAFIT. (2.23)

He explains that 20 years ago, it was not the paramilitary groups that had the power in the area, but branches of guerrillas (FARC). And that nobody would or could go there, if they didn't know someone in the neighbourhood, because it was really dangerous. Today though, it is a very different story that it was before, and watching the neighbourhood when travelling with Line J is something extraordinary.

"At that time (20 years ago) it was not paramilitary, it was more like branches of guerrillas, in the city I guess, around that time. It was really, I mean, it was not the place that you wanted to go if you were not a person from there. Or, if you, you couldn't go there if you were not with someone that they knew, it was very dangerous. And eeh, it is a completely different story. Now it is a, when I go into the metro-cable, seen from the air, places that I was 20 years ago, it is a very interesting perspective." - Calderon, Postdoc researcher on gentrification at URBAM, EAFIT. (2.02)

Graham (Graham: 2010) writes that the power of non-state actors, are gained through appropriating the technical infrastructure that upholds modern urban life. FARC, paramilitary groups were in control of the streets in the areas where Line J were later implemented, and threatened the sovereign power of the Colombian state in the area at that time. The Colombian government responded with a violent act that was going to help take back control of the area. The next analytical part of this chapter tries to look at this event that might have paved the way for the social mobility intervention Line J to be even possible in San Javier.



Figure 16: Comuna 13. Funck:2020

Picture taken of graffiti in San Javier, Comuna 13.

10.2 Operation Orion

Between the 16th and 19th October in 2002 the Colombian government carried out the largest military operation in Colombian history in San Javier, Medellín. (PBI Colombia: 2017). The Colombian Human Rights organisation explains that it was *“the largest urban military operation ever to take place in Colombia, which left one person dead, 28 injured and 355 arrested (PBI Colombia: 2017)”*. These numbers of people that got killed or injured are the official ones, but citizens have said that the military operation continued until 2003. (PBI Colombia: 2017). PBI writes that:

“More than 1,500 troops from the 4th Brigade took part, in conjunction with the Department of Administrative Security (DAS, now dismantled), Police special forces and members of the Public Prosecutor’s Office, to fight the urban militias of the Revolutionary Armed Forces of Colombia (FARC), the National Liberation Army (ELN) and the People’s Armed Commandos (CAP) which operated in District 13” (PBI Colombia: 2017).

There was a war in the city between non-state and state-fighters and the public space was a battlefield. The government were in these days in direct war with the population of San Javier. PBI writes that this military intervention was only one of several military operations that the government had carried out in 2002 before operation Orion occurred and was the beginning of what they called 'Democratic Security'. They write:

"Operation Orion was the last in a series of military operations carried out in 2002 and the beginning of the policy of Democratic Security". - (PBI Colombia:2017).

So Operation Orion was part of policies called 'Democratic Security', which later resulted in the paramilitary group AUC took over control of the area. This resulted in a war between different violent groups that affected the whole city of Medellin. PBI writes that:

With Operation Orion came the incursion and takeover by the 'Cacique Nutibara' Block of the Autodefensas Unidas de Colombia (AUC) paramilitary group, under the command of Diego Fernando Murillo Bejarano, alias 'Don Berna': "Orion enabled them to get rid of one armed group (the guerrillas), to let in another one, which ended up controlling District 13. This was the first foothold of what became a paramilitary hegemony over the whole of Medellin" (PBI Colombia:2017).

Ivan Sarmiento describes these extreme events that occurred only a few years before Line j was introduced as a cruel chapter in history with many people killed. But he says, that now the area is safe, full of tourists and open to the world. And that the society is peaceful and in a politically stable situation:

"Yes, Operation Orion. There were a cruel intervention with many person killed and. but the community now is a community"..... "With an environment different in peaceful condition and political condition, because it is open to the world, they have visitors from people around the world and I think that this intervention was a cruel chapter in the of the history but now is a touristic attraction" - Ivan

Sarmiento, PhD, and senior researcher at Universidad Nacional de Colombia.
(18.34)

Sarmiento criticizes the way that the government carried out this military intervention to take control of the area, but points out, that the government had to act. He says that a lot of organizations are working in favour of the neighbourhood, that the poor people has access to the world today, and that the societal change that has happened is fantastic:

*"Possibly is this have not been the best way to do the order of the control of the state in the territory, but the condition in that moment obligated the government to intervene and to make the intervention in this moment in the way. And now people with the many resilience has returned to the area and to take advantage of this past and now there many organizations and groups that are a little shops and many organized woman that work in favour of the community and it is a good example of resilience And progress of a poor community that has opened the reality to the world. It is fantastic. When I visited this place with many foreign visitors. And every time I get surprised from all the new things that I found. - Ivan Sarmiento, PhD and senior researcher at Universidad Nacional de Colombia.
(20.02)*

I spoke to a social worker from Juan XXIII, Simone, to hear his opinion about the military interventions that happened in his neighbourhood before Social Urbanism and Line J was introduced in the area in 2008. He said:

"There was! There was! A big military intervention in 2002.. Orion Operation. But after that, no, the thing was really changed. And now, the Comuna is under control of police of course." - Simone, working at social organisation La Cancha de la Parrilla at Juan XXIII.

Even though the interventions might have been cruel, this social worker talks about the effects of the military operations as something positive. And he says that, today, the police has the control in the area. I also spoke to a construction

worker from San Javier, who said that he had 'lived all the violence' in Comuna 13 and that those times were horrible:

Yes I had to live the Orion Operation. I Had to lived all the violence in "la comuna 13" in the neighbourhood... It was horrible." - Horacio, Construction worker. San Javier.

Calderon says that there was a 'literally a war' in the neighbourhood, and that a lot of people are still missing from these events:

"It was a war! Literally a war.. It was horrendous. And still there is a lot of disappeared people that are missing Calderon, Postdoc researcher about gentrification at URBAM, EAFIT (04.55)

Hundreds of people disappeared and got killed in this war and the term 'La Esconbrera', was the name what happened when a lot of the people that got killed were buried in place for construction materials near to the neighbourhood. He says that:

Escombrera is basically a place where people throw rubbish... from construction..... Leftovers like the concrete, stones, things like that, sand... So there is a place there, that you know, the people throw all of this and eeh,...there is a around 250 missing..... And they say that the bodies are there" - Calderon, Postdoc researcher about gentrification at URBAM, Eafit. (04.55).

250 people got killed and their bodies were dumped at this site, La Escombrera. People are demonstrating against this violence that happened on the pictures below.



Figure 17: Own photo: Funck:2020

The photo on top were taken in 2017 when I was observing political demonstration against all the killings that happened after Operation Orion, and the following violent events that occurred, when right wing paramilitary groups took over the area. The photo to the left shows a group of people that grieves outside a cemetery. The idea of the event was to remember people that were disappeared or dead as a result of the violence in San Javier, and to show that people are still getting killed in the area. The photo to the right shows flower boxes with names of people that are disappeared or killed in San Javier. At the same time they represent the citizens own way of moving on from the past and the violent times, by decorating the material space around San Javier.

10.3 Surveillance

In the last two parts of this chapter's analysis, we focused on how non-state actors, like paramilitary groups and FARC were in control of Comuna 13 before 2002 and some time after that as well. We have looked at how the government has used force to take back the control in the area through military interventions that eventually lead to many people getting killed. In this part of the analysis, we are focusing on how the government are now using technological solutions to conduct a more silent warfare, through intense surveillance of people's everyday lives in these neighbourhoods, where at the metro-cable station of Line J are located. This analytical part presents the ideas of some mobility experts about the surveillance in the area, as well as some of the citizens/travellers experiences of this surveillance. I was not able to find out exactly how many cameras the government has put up in the area, but at least 1835 cameras were put up in the neighbourhood, according to this photo that are shown underneath. According to the poster, the surveillance is 24 hours.



Figure 18. Funck:2020. Surveillance.

Picture taken outside of Juan XXIII metro cable station. A poster says: 24hour surveillance. Camera 1835.

I spoke to one traveller from Vallejuelos about the surveillance in his neighbourhood, who said that they had 24-hour surveillance, and that police is

always present in the area. He also said, that there are never any problems in the neighbourhood and that he likes that they are present. So he is actually accepting the surveillance, and seem not be happy about it. He says that:

"Yes, well they have vigilance 24 hours and I've seen always police there or the patrols come by and go around. But the neighbourhood itself is really peaceful. You don't see here any problem with robberies or something like that but is good to have them." - Guillermo, traveller with Line J, Vallejuelos. (Translated)

I asked a taxi-driver from San Javier if the surveillance where something that came with the introduction to Line J. He said:

"Yes (the security came with the implementation of Line J), that is part of what have happened the last years here in the San Javier" - Erdnan, taxi-driver, living in San Javier for 32 years.

He also said that there are cameras everywhere. And that in general, there are a lot of security:

"Yes everywhere. And camera's everywhere. They have put up a lot of cameras. A lot. I don't know (how many). But there are a lot of security now." - Erdnan, taxi-driver, living in San Javier for 32 years.

Another perspective, that I found interesting and relevant, was the interpretation of the cable-cars as objects that works to influence the behaviour of the people that lives in the neighbourhoods, as a sort of surveillance mechanism. There are constantly people travelling in the metro-cables above the house where people live,. They are able to look down see what they are doing. Emmanuel Ospina explains this, and that it could be used to control the behavior of the people in the areas. He says:

"People there feels like with the cable cars going over there heads, they are being watched, they are being observed, like the big brother or something like that. So

symbolically, eeh, there is some, a sort of control of their behavior between the metro and the government.” - Ospina, Reseacher in Sustainable Mobility and Urban Transport/Part of the Urbam Team. Working at the mobility office of Medellin (23.50)

Ospina says that he has experienced that people from the informal neighbourhoods of Line J, felt like they were being observed. And that the cable-cars, is another strategy of the government to make security in the are:

”With the cable cars in the neighbourhoods. They feel like they are being observed (the people living in the are). So yes, those are, without thinking about it, those are another kind of security strategy. - Ospina, Reseacher in Sustainable Mobility and Urban Transport/Part of the Urbam Team. Working at the mobility office of Medellin (25.57)

I spoke to one citizen about this perspective of the cable cars, and what he felt about them travelling above the houses in his neighbourhood. He said:

”No no no, it is no problem”... there are a lot of cameras here. .. It makes everything nice for the people. They are watching!” - John, 71, traveller with Line J, Juan XXIII.

So for this traveller all the surveillance at Line J is perceived as something good.

”No, it is good. It is good..... Because the cable cars have cameras, do you know that?

Its okay, because they control.” – John, 71, traveller with Line J, Juan XXIII.

John, from the area Juan XXIII, says the security systems are good. He mentions that the metro-cables have cameras. So not only could the cable cars themselves being interpreted as a surveillance object, but inside the cable car, you have security cameras observing you when you travel.



Figure 19: own. Funck:2020

This picture is taken inside the metro-cable of Line J. The black camera is placed in the ceiling of the metro-cable, so that it is possible to observe the travellers.

Milton, a security guard that I spoke to about the surveillance of Line J said that what he liked about the surveillance of the metro-cable was, that he avoided uncomfortable behaviour from other travellers because of the surveillance. He said that in the busses or in the cars, a lot of criminal activity is going on, and that you have to make friends with these people, and play 'the game', to avoid getting in trouble, because of the lack of security. He said:

However, you can see a lot of criminal activity in the buses or at the cars, and you have to be like friends with them (the criminals) and talk and play the game to avoid problems. So yes with the cable car we avoid a lot of uncomfortable situations." – Milton. Security-guard and traveller with Line J, Vallejuelos Station.

Juan, a security guard at Vallejuelos station said that each station has their own camera, and that they are connected to the police so if anything happens, they can react fast: As well as the mentions that not only the visible surveillance are being conducted, but also people's voices can be recorded and listened to, and that the technology covers a large distance. He says that:

"Yes, each station has it's own camera, and they are connected with the police so In case of any emergency they know and react.....The camera is a dome so it actually covers a big area and if you're closer to it they can listen to what people is saying and it covers a huge distance" – Juan Miguel Guisao, Security guard and Vallejuelos Station.

But not only are the metro-cable stations connected with a police station, they are also connected to a military base on top of the first hill that Line J travels above, where they have a command centre. This shows how Line J is in direct contact with a military command centre. He says that they are always monitoring what is going on at the metro-cable stations, and that they use walkie-talkies to constantly communicate:

"Yes it (the cameras) is connected (with the military base up the hill from the metro-station). It has, like a command centre, where each camera sends (information), it is like the traffic ones, there is always someone monitoring the cameras at the same point. So metro cameras work the same, there is someone in charge of the cameras and is always communicating what is happening in every point.... that's why they have walky-talkies so they can communicate with other stations. " - Milton, Security-guard at the metro, and traveller with Line J, Vallejuelos Station

So the presence of the military in the neighbourhood today is still very strong. They are there to identify potential threats, they listen, and the watch the civil society that lives in these neighbourhoods, and the people I spoke to, only felt more secure because of it. This leads to the next focus of this new military urbanism analysis that focuses on the military presences in these neighbourhoods of where Line J metro-cable stations are located.

10.4 Military Presence

As described in the earlier analytical part of this chapter of New Military

Urbanism, surveillance is a big part of the mobility strategy, and a strong element

in the presence of Line J in these neighbourhoods. In this part of the analytical chapter we focus on the military presence in these areas and how the citizens and travellers experience it. The military presence alongside the route of Line J is especially noticed when you travel above the first hillside right after leaving Juan XXIII station on the Line J route.



Figure 20. Funck:2020

Picture taken in between Juan XXIII and Vallejuelos at the top of the hill where a military base is located. The same military base that are connected to the metro-cable stations, so they are ready to act, if anything problems occur.

My experience was, when I spoke to the military at the military base was, that their relationship with the citizens were good, in contrast to the tension that caused the events that lead to the military operation in 2002.

I spoke to Simone, a social worker from Juan XXIII about his relationship with the military, and his opinion about their presence in the area. When I asked about his relationship with them he said:

"Really good... no its really cool this. No, eeh, kids say bye to the police, no its really good." – Simone. Social organisation La Cancha de la Parrilla. Juan XXII.

He also explains how he sees the military presence, how he perceives their own attitude towards the citizens:

"And on the top, on that side, there is a military home And they are usually happy to walk, every time in the day. And just control." – Simione. Working at the Social Organization La Cancha de la Parrilla. Juan XXIII.

He says that they are happy, but also that they control, but it seems like it is not something negative in the eyes of Simione. But at the same time, he does not view the government as a friend of the area. He says that:

"Yes for the government. All the people that live in this area are criminals. It's just normal to think about it. But it's not true." – Simione. Social organisation La Cancha de la Parrilla. Juan XXIII.

So for him, the opinion is still, that the government is a kind of enemy, even though the relationship with the military in the area is good. Horacio, who has been living in San Javier for many years and have experience all the violence and government interventions, he said about trusting the government:

"No, the thing is that the government is like a lottery, because if you trust them more, it is when bad things start to happen, so you can't rely on them." - Horacio, Construction worker. San Javier.



Figure 21. Funck:2020

Military base. Picture taken from inside the metro-cable. The military base is located at the top of the hill in between Juan XXIII and Vallejuelos Station.

Oscar Murillo from Juan XXIII says about the control of the area that has increased the last 6 years, that it is wonderful. That more control is present, the police are there, the military are there, and that he does not experience violence. He mentions this as the main change of the area. That now he is able to feel safe:

"I have seen in this 6 years that the law control is more present. Equally the police and military, because they have control in the neighbourhood, so you don't see violence.. Everybody is in peace and it was even a great December, a peaceful one, without guns or bullet, just fireworks, but really controlled by the police, very controlledand that's the main change. So you feel wonderful, you feel safe." -

Oscar Murillo, 68, traveller with Line J, Juan XXIII, he only has one leg so he moves around in his wheelchair. (Translated)

The main change of the area is, that it is safe now, according to Oscar Murillo, that have been living in Juan XXIII for some time now. There are no guns and shootings anymore in the neighbourhood, and that the police and military are present. This leads us to the last analytical focus of this projects fifth and final analytical chapter – How Line J has been used as a tool to create safety.

10.5 Security

Stephen Graham (Graham: 2010) has given us, through the perspectives of New Military Urbanism, an opportunity to view how modern infrastructure such as Line J, that not only functions as an innovative technology to socially include a poor and socially excluded population, but also, can be used as military instrument in the fight against non-state actors to create security and dominate territories in public spaces. How the Colombian government has taken back the control of the infrastructure in San Javier, where the people, and the state police, were not able to enter before. Stephen Graham describes how a boundless condition of urban war dominates in the descriptions of urban societies, which is used to legitimize the surveillance of urban civil population. But here in San Javier, it seems like the population are satisfied with the surveillance, and even though, the military interventions were described as horrible, the security strategy seems to provide the basic security for the people living in these poor neighbourhoods, and that they appreciate a life without shootings and gun violence, and that they associate that with the level of security that this strategy provides.

When asked about how Line J has influenced the security in San Javier, the taxi-driver Erdnand says:

"Uff, it is another world here today. Before, there were so much violence. So much violence. It is not like that anymore. And poverty. And it was very difficult to find work." - Erdnan Taxi-driver. San Javier.

I also spoke to John at Juan XXIII, he said that the neighbourhood has changed a lot. Before, there were a lot of gangs. But now, the people that goes into the are has another 'mind':

"It has changed, the neighbourhood has changed a lot. Because sometime (ago) it was very bad, and you know a lot of gang people, but now it's good. People come in changed the mind" – John, 71, traveller with Line J, living at Juan XXIII for 5 years.

And, according to Simone, a social worker in Juan XXIII, the area is total safe now:

"It is totally safe, totally safe. Until 2006 or 2007 it was very dangerous. Like 10-12 years ago. And from these cable-cars the place totally changed I mean they are really, so this cable changed their life. - Simone, working at a social organisation (La cancha de la Parrilla) at Juan XXII, and living in the area.

According to Simone, Line J has saved the life of the people living in Juan XXIII, and now, the area is totally changed compared to 10-12 years ago. Another citizen living in Juan XXIII agree that Line J has brought more safety, and that now, it is really easy to move around:

"It also brought a lot of safety to the neighbourhood. Its really easy to move and he feel more safe." - Ovidio, 34, traveller with the Line j, interviewed at Juan XXIII. (Translated).

So public space has become full of surveillance. But it has also become safe. That has been the price. I also interviewed a security guard, to get a more professional view on the security situation at the metro-cable stations at Line J. He said that:

"Well in this area it is really quiet and easy, especially at the cable areas.... the people are really respectful and take care of the system so we rarely have bad situations with the users" -Juan Miguel Guisao, Security guard ant Vallejuelos Station

So from being one of the most violent areas in Medellin, once the most violent city in the world (Brand: 2013), the security guard describes the situation at the metro-cable stations as quiet, and says that people are really respectful. This taxi-driver from San Javier says that major changes has happened since Line J was implemented, that it was dangerous before, and that now it is very safe:

"There have been major changes since metro-cables came into being. It was dangerous before. Now there is life in the area. And it is safe to live here. Now I've never experienced any problems." - Dubian, Taxi-driver. San Javier.

It is clear the people living nearby Line J metro-cable stations experiences the metro-cable to have influenced the area in a positive way when it comes to safety. And this is what these statements show. One traveller says that before it was 'caliente' (dangerous), a visitor of the area says that Line J represents a transformation into a society that is safe and peaceful, and one shop owner from Juan XXIII says that it is safe now and that he feels really happy to live there:

"Its a representative, it shows a lot about the city. That now everything is safer, before its was really like "caliente'." to walk around. And now it is really safe to walk around." - Luis, 38, traveller with Line J, living at Juan XXIII.

"The cable car represents safety, and tranquilidad, or peace.. It represents a big transformation in the comuna." – Nelly, 61, visitor of the area, interviewed at Juan XXII. (Translated).

"The place has changed a lot and that it is really safe now and that he feels really happy living here". - Luis, 51, shop-owner at Juan XXIII, has lived there for 16 years, and a traveller with the Line J

I spoke to one of the operators at San Javier Station. He said about the safety:

"Before you could not go anywhere. People were scared, and it was very different from what it is now". John, Operator of Medellin Metro at San Javier Station.

One traveller pointed out that Line J was not only about mobility, but also about the safety that Line J had brought to the area:

"It has changed a lot, and not only on the mobility perspective, but also the safety of the comuna." - Marí, 36, traveller with Line J, interviewed at Juan XXIII. (Translated).

So the mobility of Line J is much more than just a cable car, it is something that represents safety in the areas along its metro-cable stations. It is something that has created a very different societal situation after it was implemented in 2008. It is associated with being the part of the progress that has happened since the historical violent events occurred in 2002, and even though it is monitoring the citizens that are using it, they are still happy to use it. Now we are going to sum up some of the central points of this analytical chapter.

10.6 Sum Up of New Military Urbanism Analysis

We tried to investigate how Line J could be seen in as a form of military urbanism. We did that by analyzing the historical context of the area where Line J was implemented and how it could be seen in the perspective of the ideas within New Military Urbanism. The violent events and extreme societal conditions that have previously characterized San Javier have resulted in military installations and intensive surveillance as a part element of the metro-cable Line J that government uses to identify potential threats coming from the area. Public spaces around the stations and the infrastructure could be viewed as a continuing battle-space for a low-intensity war, that never stopped after the military interventions in 2002-2003, when FARC and Paramilitary Groups had taken the control of the area, fighting a violent war that led to the biggest military intervention in Colombian history – Operation Orion – where hundreds were killed because of the subsequent wars in the in Comuna 13 between FARC, Paramilitary groups and the government. The massive surveillance that are used as an integrated part of the metro-cables, its stations and the area around them, could be viewed as a more silent war-fare, a strategy for the government to keep the control of the area. There are at least 1835 cameras in the areas at the metro-cable stations, there are cameras inside the station, inside the metro-cables cabins, as well as how the metro-cable moves above the houses in the area, could work as a form of surveillance. Some say that the insecurity that the criminal activity creates when travelling on busses in Medellin is avoided with Line J because of this massive Surveillance. The surveillance cameras at Line J stations are connected to the police and the military base located nearby, so the

authorities are able to act fast if any criminal activity happens. The Military presence in the area is part of the mobility strategy of Line J, which is seen in the direct communicative connection between Line J surveillance and the military base nearby. The military presence does not seem to bother the citizens and travellers on Line J, even though the government is not perceived as someone who can be trusted. The military and police control of the area is associated with peace and the decrease of violence and shootings in the area. Line J has functioned as innovative technology to socially include a poor and socially excluded population, but also, it has also been used as military instrument in the fight against non-state actors to create security and dominate territories in public spaces along the route of Line J. It seems like the population are satisfied the security strategy. That it has provided the basic security for the people living in these poor neighbourhoods. According to some, the area is totally safe now, which makes it easier to move around in the area. People are more respectful now, and that major changes has happened since Line J was implemented, compared to before, when the area was really dangerous. For these people, Line J is not only about mobility, but also the safety it has brought to the area.

11. Conclusion

This project has investigated how the impact of Line J is experienced along its route in Medellin. Five sub-questions were developed to limit the research area of this investigation, and through the five last chapters, this project have analysed data that were collected to answer these five questions. Now the conclusion is presented.

11.1 How are the Materialities of Line J Experienced?

According to the travellers the floor of the metro-cable feels unstable because the metro-cable 'floats' through the air. The big windows make you feel 'out in the open', and the view is beautiful, because you are able to see everything around you. The view could be experienced as a kind of entertainment while

travelling, but sometimes, the windows are not clear enough to see through, which is a pity. The window's ventilation system is not efficient enough, which can make it pretty hot and uncomfortable inside the cabin. The view from above and with a distance to the City of Medellin makes you able to notice the change that has happened in the city. It makes you able to discover new places you did not know existed. Some travellers get scared or dizzy when travelling with Line J. Some experience a small pressure in the ear. And some people said it could feel like a vacuum inside the cabin. It creates fear, when the metro-cable stops during travels, or when travellers imagine that the cabin falls down. But after some time most travellers gets used to it. The colours of Line J are associated with the flag of the Antioquia, so they represent their region, and are also associated with the colours of the annual flower festival. People are satisfied with the material of the seats in general. But, there are exceptions. Some thought they were a bit too hard to sit on. But there were also seats with fabric on them. These were more comfortable to sit on. The level of comfort is not experienced as luxury, but it gets you to your destination, and is more comfortable than travelling with the regular metro-line. The space inside the cabin is neat and nice, but not too big. And the safety on board the metro-cable is experienced as good, even though seatbelts for kids should be considered, because of the sudden stops that it sometimes makes.

11.2 What are the Critical Points of Contact on Line J?

Two of the main critical points of contact for the travellers occur in the peak hours, and when travellers have to wait for the buses or the metro at the metro-cable stations. Peak hours are worse at San Javier and La Aurora Station compared to Vallejuelos and Juan XXIII. Sometimes travellers have to wait 40-60 minutes at San Javier Station to enter the metro-cable, which is stressing and uncomfortable. Some people start to cheat in the line, and others get frustrated. The capacity of the metro is not sufficient to transport the amount of people that are travelling in peak hours, so the metro-cable is over crowded. The capacity problems of Line J and the rest of the metro-system are serious and might

require a change of the whole rhythm of the city. The networks are congested during peak hours, which could be solved by making Medellin a 24-hour city, according to one of the mobility experts. And these capacity problems are especially significant for the metro-cables, because they have the lowest capacity of the metro network. Some argues that the system is completely collapsed during peak hours. When Line J closes during maintenance of the metro-cable it also creates critical mobility situations, because travellers have to use busses instead of Line J, which has more stops, are less direct, and takes more time. Extreme weather conditions also influences the mobility flow of Line J because the metro stops when it rains hard, or when there is a storm.

11.3 How has Line-J Influenced the Motility of Actors Along the Metro-cable Stations?

Line J has improved travellers and citizen's motility by providing access for the people living in the informal settlements, where topographical issues made it difficult to travel to the centre of the Medellin. It has helped de-isolate the areas where the metro-cable station are located, provided access for the local communities and solved a serious problem, for a lot of people that earlier had to walk up and down hundreds of stair to get downtown. It has connected many people that do not own a motorcycle or a car to their workplaces downtown. Most people do not experience the prices as a mobility constraint for access, but for the poor, the tickets in the busses are negotiable, which makes them more attractive. Line J has improved the motility of people with disabilities and access along its route. People along the route of Line J that were potentially suffering a mobility constraint because of physical disabilities explained that their disabilities did result in less access. The people that work for the metro-cable helps them getting in and out, and make sure that they are not limited in capitalizing on the potential mobility capital of Line J. The symbolic status of the area has changed with after Line J was implemented and now the areas attract tourist from not only Colombia, but also people from around the world. The citizen's capitalizes on new tourism in the areas, which has been good for the local economy. But not all the areas around Line J benefits equally. For example,

at the metro-cable station, Vallejuelos, where not a lot of tourists are visiting, because it is a place people travel through to get to the viewpoint at La Aurora Station. Line J has generated business opportunities along its route, which has made people from other neighbourhoods travel to the earlier excluded urban areas to find work. For example, right outside of La Aurora Station, which is now a hot spot for small informal and formal stores to sell their products.

11.4 Has Line J Created Gentrification at its Four Stations?

Some places, Line J has caused the house prices and land property to go up two-three times along its stations. The classification of houses in the public socio-economic stratification system has also gone up at La Aurora Station, which means that public services are now expensive in the apartments. An increase of prices on rent, mainly created by tourism in the area, has meant that some people were forced to leave their homes. Though, these dynamics has not created significant displacement according to experts, because is still attractive to people with great purchasing power, because of its historical associations with poverty. When Line J was constructed, a lot of people with money invested in the land along its stations, further west from the original informal settlements, because they hoped for the prices to increase. This could be argued to have generated an expansion of the informal settlements motivated by capital gains, which has lead to the construction of homes around Line J.

11.5 How Could Line J be Seen in as a Form of Military Urbanism?

The fights between paramilitary groups and FARC lead to the biggest military intervention in Colombians history, Operation Orion, conducted by the Colombian Government in San Javier 2002. The battle of public space continued in the following years where hundreds of people were killed. Today, the government has control of the area. Line J that was implemented in 2008 could be seen as an element in the continuing battle of public space in the on-going

low-intensity war, which never really stopped after the military interventions in 2002-2003. A military installation located in between the metro-cable stations at Juan XXIII and Vallejuelos, have access to at least 1835 surveillance cameras that are put up inside and around the metro-cable stations. And the psychological effect of having cable cars travelling above the houses in the informal areas might also influence the behaviour of the citizens. The military presence and surveillance does not seem to bother the citizens living in the informal settlements. They experience it to provide security for their neighbourhood. And they associate the impact of this strategy with an improvement of how it was before, when the area was really dangerous. For these people, Line J is not only about mobility, but also, about the safety it has brought to the area.

12. Reflections, Challenges, Usefulness, and Future Research

Theoretical reflections

The theoretical analysis apparatus that has been used to elucidate the five sub-questions has been specific in their focus, and useful in their conceptual world, to elucidate in detail the issues that the task had set out to investigate. However, with the exception that the ideas and conceptual worlds of this project, that were inspired from Stephen Graham's book, *Cities Under Siege* (2010), have not been sufficiently useful to focus on historical, contextual, and highly relevant events that occurred in the western part of the informal area San Javier, Medellin. These incidents, including Operation Orion, which preceded the military urbanism that Line J serves as an element in, can be seen as the background for, and the Colombians government's strongest arguments, for this military urbanism in the area. The book draws on knowledge about global trends on, how governments' argues and legitimize the intense public space monitoring through urban infrastructure, by using narratives about internal and external societal threats. The perspectives that the book has provided, were useful, but in my experience, not sufficiently to analyze the relevant, contextual and complex background history of this area where Line j was implemented.

Challenges of doing research in Colombia

First of all, the challenges that come from language barriers when conducting such investigation are important to point out. Even though I speak some Spanish myself, the only way that I could have conducted these interviews, in these areas, and with this target group, was by hiring a local interpreter, with knowledge of the area, culture and how to communicate with the people that lived there. The Spanish language changes a lot depending on, in which part of Medellin you are located, which means that the meaning of the words can be interpreted very different from neighbourhood to neighbourhood. The meaning of words that the people I interviewed used to describe their mobility experiences obviously influences the translation and meaning of conversations, which has influence on the analysis and conclusion of the project. By using a local interpreter, with skills in communication, and with the talent of making people feel comfortable enough to share their stories, this project had the opportunity to collect a lot more interesting and personal data about the impact of Line J. Cultural differences were also a big challenge in the sense that time and appointments are perceived a little bit different in Colombia. Many of the appointments I had with people I was supposed to do interviews with were cancelled or they forgot it. Also, a lot of data about Line J that I was promised from different people spoke to, were never send to me. So this is something to keep in mind and to learn from, when doing investigations in other counties. Again, the meaning of words varies from culture to culture. I had not foreseen all these challenges before I started my investigation, and they meant, that a lot of the interviews, and a lot of the data collection I did, required more time and more resources that I had anticipated. For future research, in other countries, with other cultures and languages, these reflections and experiences about the cultural, linguistic methodologically challenges that I had, could be used as inspiration for, what should be kept in mind when doing a field study in another country.

How can we use this research?

The conclusions from the analyses of the materials of Line J, could be used in the design of new cable cars in other areas where such mobility solutions could be

useful The details in the experiences of the travellers who travelled with line J provides us with a valuable insight to what it is to travel with Line J. For example could the floor be designed to more stable when the cable car moves, the there could be seatbelts for the kids, the windows could be more clear if possible so the travellers could enjoy the view, and the ventilation system in the windows could be improved so regulation of the temperature were more efficient.

The research of the critical points of contact could be used when designing new integrated transport systems. For example, could there be put a lot of effort into creating a system that could work faster and be more efficient in some specific hours during the day, to prevent the critical points of contact during peak hours. The capacity design of integrated mobility systems must not be designed, so that one weak link, affects the other connecting mobility systems. And also, the low capacity possibilities that are incorporated into the design of the metro-cables must be re-thought, when considering constructing new metro-cables.

The motility research of this project could be useful to inspire other cities around the world to use mobility systems to provide access to low-income and socially excluded areas. It could inspire to use innovative infrastructure to help de-isolate areas where societal or topographical problems occur, or where people can't afford private transportation. And it could inspire to improve mobility situations for people with physical mobility problems.

How can this project's research about mobility and gentrification be useful? It could be used to put focus on the dilemma of upgrading socially excluded neighbourhood with the help of infrastructure, without increasing house prices and prices on rent for the people that live near to the stations, so that some people experience this as negative for their life circumstances. The dilemma of equally distribute the values that the infrastructure brings to the area, without creating gentrification, and displacement of some of the areas poorest and less resourceful people. The research about Line J and military urbanism could be used as frightening example of how mobility can be used by the government to monitor its own population, and as form of silent-war fare where the private life

and public spaces are seen as the battle space for possible threats for the governmental. Or it could inspire, as an example of how mobility and surveillance combined could be used as a security strategy to create decrease the problems in areas where extreme violence and insecurity has plagued the citizens, and made it impossible for them to move freely in the streets.

Future research

A deeper analysis of the motility impact of Line J on citizens in the areas where it is implemented could be investigated. The project collected data about the travel patterns of people going from all four metro-cable stations of Line J, and to all other metro-stations integrated in transport-system from 2008 to 2017. There was not time enough to analyse these data within the four months of this project, because I received the data two months later than I expected. These data, combined with data about the development of the socio-economic stratification system between 2008 and 2017 in Medellin's neighbourhoods, could be used in an analysis, where the two data are integrated. The travel patterns of citizens could be combined with the socio-economic data, to illustrate how citizens from low-income areas has travelled in between own neighbourhoods and to other differently stratified areas within 2008-2017. An interactive map could be created, that shows the development of travel pattern and the development of the public assessment of the areas stratification at the same time. This could provide indicators and perspectives on how people from different spatial and socio-economical classified areas of the city, has been moving with public transportation in between 2008 and 2017 in Medellin. The socio-economic system is not based on economical income, which would be the Achilles heel of such project.

9. Bibliography

- Brinkman, S. 2010. Kvalitative Metoder. Forfatterne og Hans Reitzels Forlag.
- Castree, N., Kitchin, R., & Rogers, A. (2013). "Gentrification." In *A Dictionary of Human Geography*. : Oxford University Press. Retrieved 31 Jan. 2018
- Davila, J. 2013. Urban Mobility and Poverty - Lessons From Medellin Soacha, Colombia. Published by Development Planning unit, UCL and Faculty of Architecture, Universidad Nacional de Colombia (Medellin Campus).
- <https://www.oxfordlearnersdictionaries.com/definition/english/displacement?q=displacement+>
- Jensen, O.B. Morelli, N. Critical Points of Contact – *Exploring networked relations in urban mobility and service design*. Department of Architecture, Design and Media Technology, Aalborg University. Danish Journal of Geoinformatics and Land Management. Vol. 46 (2011), No. 1, pp. 26-49.
- Kaufmann, V. Bergman, M. Joye. D. 2004. Motility: Mobility as a Capital*. Internatinal Journal of Urban and Regional Research.
- Lubcke, Poul. 1995. Når mennesket undrer sig. Kapitel: I helhedens perspektiv.
- Mapametro: 2019. Found the 4th of December at, link: <http://mapametro.com/en/Colombia/Medellin/Medellin-Metro-map.htm>
- Metrodemedellin. Fares: 2019: Found december 19. 2019 at [:https://www.metrodemedellin.gov.co/en/travelwithus/fares](https://www.metrodemedellin.gov.co/en/travelwithus/fares)
- Ole B. Jensen (2016) Of 'other' materialities: why (mobilities) design is central to the future of mobilities research, *Mobilities*, 11:4, 587-597, DOI: 10.1080/17450101.2016.1211826)
- Oxford dictionary: The word "displacement". Found february 19, 2020 at this website:
- Oxford dictionary: The word gentrification. Found february 19, 2020 at this website:

<https://www.oxfordlearnersdictionaries.com/definition/english/gentrification>

- PBI Colombia. 2017. Operacion Orion. Published the 10. 01. 2017 by Peace Brigade International (PBI COLOMBIA. Link: <https://pbicolombia.org/2017/01/10/operation-orion/>. Article found the 2.12.2019.
- Urry. J. 2000. Sociology Beyond Societies. Mobilities of the twenty first century. First published 2000 by Routledge 11 New Fetter Lane, London EC4P 4EE

10. Appendix

- **The order of the data in appendix**
- **Interview guides**
- **Expert interviews**
- **Interviews with travellers at the four stations**

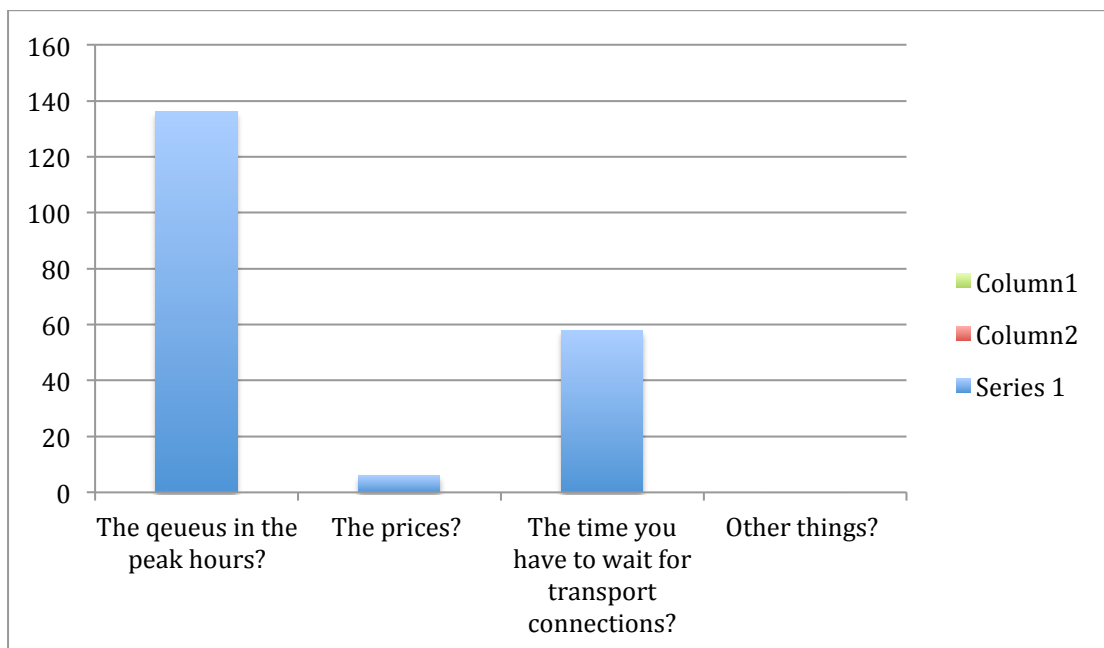
San Javier
Juan XXIII
Vallejuelos
La Aurora Station

Materialities: Interviewguide:

- Floor
- Windows
- View
- Travelling with Line J
- Colours
- Seats
- Comfort
- Speed
- The Space Inside Line J
- Distances (To The Ground)
- Safety

CPC: Interviewguide:

- What which problems do you experience as most critical for the flow of mobility with Line J Line J?
- Queue in peak hours? 136
- The prices? 6
- The time you have to wait transport connections? 58
- Other things? 0
- Where does these problems occur most often? San Javier? La Aurora? Other places? (96 respondents chose to answer this question)
- San Javier 41
- La Aurora 55



(Table: XX. Source: Funck: 2020. Graph illustrates which problems the travellers experience as most critical for the flow of mobility at Line J. (Funck: 2020).

- Maintenance
- Peak Hours
- Capacity Problems
- Line J Connections
- Weather Conditions

Motility

- Topography and Access
 - Access to the Workplace
 - Access and Prices
 - Disabilities and Access
 - Line J Effects on Tourism
 - Line J effects on Business Opportunities
 - Gentrification
-
- Increasing House Prices
-
- A Potential Return on Capital Investment?

Military Urbanism

- FARC and Paramilitary Groups in Comuna 13
-
- Operation Orion
 - Surveillance
 - Military Presence
 - Security

Expert interviews

Expert Interview: 1

Date 28/11.2019.

Name: Iván Reinaldo Sarmiento Ordosgoitia

Title: PhD/ Senior researcher/

Location: Universidad Nacional de Colombia

Department: Department of Civil Engineering

R: Okay so its been, has increased (the numbers of passenger with line-J)?

I: Yeah, this is the matrix, origin destination of moving between different station in the metro systems. For example line a. eeh, Metrocable. The number of passengers that are travelling be

R:

I: 15000 thousands people are going out form (4.30) from the station every day. (5.55) and 15.000 people returning 30 thousands

R:

I: 6:35 here has been an increase of 100% in ten years. In ten years. Then every year the increase has been near 8-9% a year. In ten year it has doubled the figures from the beginning when it was moving. That is an important number of passengers. So, in the beginning, no, but now, yes.

R: So it is successful now?

I: yeah, it is successful now. At the beginning only 15 thousands or 14 thousands. In contrary to Line-K that in the beginning was successful. At the beginning Line-K started with a lot of passengers. Now Line-K move more than 45 thousands.

R: A day?

I: yes. A day. Because cable A introduced more passengers. But the capacity is not possible to increase more. Because of incapacity from some years ago it has incapacity. But line-J is arriving to incapacity.

R: And that could be a problem, maybe?

I: Yeah, now, I visited it last week and I could see a lot of people returning In the afternoon at 6pm in the afternoon. It was crowded.

R: I used to travel with the line everyday and it was not full of people.

8.58)

I: yes, it is especially in peak hours. Becasuse there are hours where it is possibly not a big problem. This is an important: if you want to have the figures: Every year. Because I have the matrix from every year. 2008, 9, 10, 11, 14,...

R: yes, that would be so good.

I: You can compare (9.30) over the 10 years.

R: What I also focus on. I focus on 4 things. I also focus on gentrification

I: gentrification.

R: gentrification in the area. If that has happened due to the metro station. If prices has gone on or people had to move out of their house. That is also coupled with economy but I don't know if there has been made any studies of that?

I: Bu the gentrification is specifically what The process of expulsion of people or the concentration of people in one are?

R: I was thinking about people that were moving out like if this has caused that people have to move to other areas? Because now it is getting more connected. And less informal. I don't know anything about the house process has gone up in that area?

I: No I did not have information of this, land use or prices of the land or buildings.

R: I am going to talk to some real estate agent. I think they have some knowledge about it. Bu I don't know it there is real estate agents in that area? You know people that sell the houses? Or the municipality?

I: The municipality or planning offices. There is an private organization but Its related with public service its Lonja. 11.48. Lonja.

R: Okay, mm.

I: Lonja de Propiedad Raiz. Is like an office of real estate studies. They study the value of the land and prices of the properties or the buildings.

R: Is that in connection with the strata? Stratification also?

I: Yeah, there are different (...) when they studied the land.

R: It is the municipality the decide the strata right?

I: Yeah, the municipality classifies the different sector in strata but the strate only respond to the house not to the person.

R: And to the geographical area right?

I: Eeeh, the characteristic of the house and the environment of the area. But it has some problems because you can live in the low strata but you can be rich haha. And then you can pay low for your house or for eehm your public service. Water and electricity. There are no justice in this classification in this sometimes. In general yes but eeh, but there could be some differences.. This is Lonja Propiedad de Raiz (14.20)

R: Okay.

I: This is the company. The company that offer the information about the price.. eeh Lonja. Zero. But they are not public they are an organization, but it has credibility now that they are the best information.

R: But also the numbers that you showed me before

I: then your first point (17.33) is strate and gentrification.

R: Yes and then I look at eehm. (this strate is not really a focus point its just something I need to put in also. I look at the line-J as a military intervention trying to pacify the area or paramilitary groups in this area)

I: Yeah,

(17.56)

R: Maybe the people there experience that. I have found some articles about it. Because, of course they are trying to improve the living standard in the area for the people, but also they are trying to take control, the government in that area.

I: This is an interesting history of 20 de Julio dependencies where the escalators are located. Have you visited where the escalators are located?

R: Yes.

(18.34)

I: They can relate it, too talk about the history of the military intervention. But it was in the past. More than ten years ago.

R: Operacion Orion?

I: Yes, Operacion Orion. There were a cruel intervention with many person killed and. but the community now is a community with many. With an environment different in peaceful condition and political condition, because it is open to the world, they have visitors from people around the world and I think that this intervention was a cruel chapter in the of the history but now is a touristic attractor,

R: Yeah.

(20.02)

I: Possibly is this have not been the best way to do the order of the control of the state in the territory, but the condition in that moment obligated the government to interveen and to make the intervention in this moment in the way. And now people with the many resilience has returned to the area and to take advantage of this past and now there many organizations and groups that are a little shops and many organized woman that work in favour of the community and it is a good example of resilience.

R: yea,

I: And progress of a poor community that has opened the reality to the world. It is fantastic. When I visited this place with many foreign visitors. And every time I get surprised from all the new things that I found.

R: But you know it (the area) from before? Like before like 20 year ago? Did you go there also or was that not possible?

I: No that was not possible. (21.57) it was dangerous.

R: yea okay.

I: If you , if you eeh, don't, didn't have a, a pass or a. I don't know how to say it. A permission to enter you don't cannot, couldn't enter to this territory. Because you were a dead man. Hahaha.

R: it was like military controle they had in the area? Was it the FARC or the paramilitary groups or sicarios? Or?

I: (22.52) In the beginning it was the guerilla. Then appeared the paramilitaris. Then the paramilitaires confronted the guerilla and they were fighting for the control of the territory. Then the government intervention introduced the peace but with many people killed. It was a difficult situation. Because the population was between two fires. Crossfires. Yea.

R: Yea.

I: Then many innocent people died in their confrontation. But now the population emerge life and, and this, people are proud now (24.11) of living in this territory,

R: yeah.

I: Many years ago, to live in this territory is was a sign of, to be less person.

R: less important?

I: Yes, less important. People want to get a job and if he said that he lived in their community it was not contracted.

R: It was not possible?

I: No. only for workers in the street for example. But not for a formal job.

R: aah, okay.

I: Because there were no confidence for the people living in the area. But now they are proud of living in this area.

R: Ah okay.

I: Because now they have many values. Because not the...

R: because that is something that I am also interested in. that is the symbolical influence of the line- j. How do people look at line j. of course it is an improvement of the area and the way people are looking at this whole area. This area has changes from the to now. (26.08) it is a certain way of transporting people and that is also a little bit associated with a social intervention. For example in Poblado there are no cable cars. So people in Poblado don't use. So you connect for example cars, metro, and so there is a functional influence but also a symbolical influence of the intervention and of these cable cars.

I: The cable cars in Medellin are associated with the idea of poor territories and eehm, territories that need assistance of the government, because Poblado is high or steep, and is similar to the territory (of San Javier). I think the metro has planned a cable car in Poblado but there not urgency to solve the problem of mobility like in poor territories. Because in the poor areas there are a more clear necessity of cable cars like in poor neighbourhoods. (27.33)

R: yeah okay.

I: Because in poor territory there are more clear necessity to connect people with the massive transport system.

R: Yeah.

I: The, ehm. The successfully of the cable cars has been to connect the mobility solution with the social solution.

R: mm.

I: And to the mobility of poor people.

R: Okay, because. You can look at it if you want to. We also built a new light rail that is supposed to be very comfortable, and it is supposed to attract people that normally use their car..... but also as a kind of social inclusion. Not only from the poor to the middle class but slos form the upper clas to the middle class. So the whole thing gets more connected in som way. I think this happens in the whole world...

I: Yes, in japan (29.05) they have these steep slides ehem. This connected peole.. All the people are disconnected with the transport system and they can not drive because they are old and tey can not connect with the metrcable and the transport system. And this is a problem of exclusion of the age. The case you mention. Is a different kind of exclusion. It is an exclusion of accessibility.

R: That is the functional exclusion.

I: There are many kinds of exclusion. And other points of view could be that upper class people could be eeh. Are auto-excluded becuse they use cars. And then they don't connect with other in the transit and the public transportation because they don't have facilities to connect with other and they isolate the people living in the mountain. This is a situation here in Poblado. People live in the mountain. 31.05. They are isolating themselves. With this option of living.

R: Like in El Retiro.

I: Yea, but sometimes there is a choice. Of people. Some people want to live alone. Far from others.

R: They should be allowed to do that.

I: Sometimes the more expensive house areas....

(Not relevant) From 32.00

33.00

I: But normally people want to be connected to others. It is the natural condition of human beings. To be related with others. To have the facilities to communicate with others. And to share the same urban space especially when the urban space are qualified and good and I knew like in these cased of cable cars people have eh, have seen that government take into account their lives and to make connectivity and new urban spaces. Before that they didn't have. The quality of the urban space. Some years ago, there was no side-walk, pavement in the street, there was no illumination in the streets.

R: so it was dangerous.

I: Yes.

R: So you also see La Aurora station as an important point for inclusion? And eehm is that an important network point? Lets say that it broke down La Aurora station? What would be the influence or the impact? Would that be very bad or?

I: Aurora is the top. In this point the government built a lot of new houses there.

R: Ah okay.

35.15

Not relevant from 35.15.

Relevant again:

36: 26 relevant again:

I: The new houses were built from 2008 to 2010. In 2010 the Sur-American games were hosted by Medellin and the athletes arrived to the houses in , new houses in the top of Aurora station. The government built more than 5000 new houses. When the Sur-American games finished, these houses were ehm dedicated to poor people in the city. Because there were many people living in dangerous zones and they were owed to these new buildings. This dangerous zone is named Moravia. Have you heard about Moravia?

37.26

R: No.

I: Moravia is a neighbourhood near the downtown. This is Moravia. But Moravia were the place where the garbage arrived. Many years ago. Decades ago. Then the garbage was disposed to the north of the City. 50km north of the city. But ehm. This place was "invalid?" for poor people. They established houses from wood and plastics. Like a slum on top of the mountains. And in the soils appeared gasses from the garbage and these gasses were contaminating people. Then all these people. I don't remember, 7 or 800 people were transferred to the new houses in the top of the Line J in La Aurora in Pajarito.

39.13

R: Ah okay!

I: This is the origin of Pajarito. This is to translate. People that were living before in Moravia.

R: Okay!

(40.13)

I: This transition or moving those people caused other problems. Because a lot of the families and relations already were in this neighbourhood of this (Moravia) of this zone, then now. people continue living, or continue travelling to this place to do the work activities and to do social activities. Because many friends of these people continue to stay in here I the neighbourhood of this place.

(40.13)

I: Because now Moravia is a neighbourhood it's a neighbourhood . It is not only a mountain there are people living in buildings (Now).

R: Okay.

40.48.

I: It was in the past. And people living in the slum in the top of the garbage. But now there are normal people living in the houses.

R: It looks different. It looks very different now.

I: Yes very different. Bu the municipality relocated some of the people to La Aurora. And now, the municipality continues to build more houses in La Aurora and LA aurora has now, ehem, near to 8000 houses. 8000 buildings.

42.02.

Not relevant:

42.25 relevant again.

I: But the natural condition of these people where that at the beginning these people lived in the Countryside. And they moved to Medellin because of violence in the countryside. In the 90s for guerilla and paramilitaries and moved to the city. And they used to have a lot of space for their animals, to do activities, and they were confused in this small living and some people brought horses and animals in the buildings and going down escalators and the stairs.

43.30 – Not relevant.

43. 44. Relevant again.

I: But this is some difficulties of the changes and the person that live in the country side some years ago and now lives in the city and now live in a building, in a high building with small spaces, have some difficulties, but, people have fortunately have a safe house that are connected house. But, eehm, I worry about the accessibility of this mountain. Because it is placed in a mountain and many services like freight or delivery is not possible to deliver through the cable car. You have to have a highway to go out with the trucks. 44.58. To deliver the freight, the food the materials to repair the, some, or to build more houses, you need a highway.

I: then today, thee are eeh, some busses that arrive there and metro-cable, you need two modes, not only cable cars, you need other modes,

R: yeah, (45.35)

I: The name is, new occident city, there are many, many houses.

R: Bu the people that live there, informal work?

I: Generally informal work, but they have to pay formal services, utilities. I don't know the social situation now, to pay they social services there.

(46.26) not relevant.

(58.15) relevant again

"R: This is actually a formal area now?

I: Yea, this is a formal are now.

R: But a lot of people came from this garbage area and then they built the metrocable and transported all the people there?

I: Yes, but this is only La Aurora Station. But there are other stations, Vallejuelos, Juan XXIII that are very informal.

R: But they try to make it formal but it is still informal, right?

I: They are improving a little bit. But they are in a poor condition. Especially Vallejuelos.

R: That is the second station?

I: Yeah in the middle.

(59.01)

I: Because the line goes down to a river,

R: yea, with the road and the river,

I: And then go up, in this moment eeh you can see all the roofs of these houses. This is Vallejuelos.

(59.38) not relevant

(1.05.00)

I: Some days people possibly don't have money to pay the cable car. Then people have to use busses. Because they can talk to the driver of the busses. And then they, the driver buss can reduce the (Not sure of the word, but certain its price). That the social conditions of this.

R: So the cable car is very formal while the busses are still a little bit informal. Ah, so there is a way in.

I: Especially with people that are poor. The driver is conscious of the situation. And they reduce a little bit the (fair (price))

R: They have sympathy. The drivers. It is because they meet a human and not a machine. The cable cars more like a machine.

I: The machines don't have feelings. Then the driver bus can reduce a little bit. For example if you have you dint have 2500 pesos, but only 1500 pesos, the "you can drive me for 150? Yes go up"

R: That is also an interesting perspective. But that maybe stories like that

(1.06.44)

Expert interview: 2

Date: 18th of december 2019

Name: Emmanuel Ospina

Title: Professor at Universidad EAFIT, Reseacher in Sustainable Mobility and Urban Transport/Part of the Urbam Team. And working at the mobility office of Medellin.

Location: Universidad EAFIT, Medellin

Department: Urbam – Department of Urban Planning at EAFIT

00.00

Rune:

Ive interviewed one of the guys who did the article, Ivan Sarmiento.

Emmanuel: Yes, but he is like the Robert Moses of Medellin

Rune: What is that?

Emmanuel: Its like, th

03.21

Emmanuel: bit its like its. I dont know, one aspect that i dont share wiht most of the people is that, wiht cable cars you dont touch the soil, and you dont touch the street, and you dont touch the neighbourhood, you just go through.

Rune: yeah yeah.

Emmanuel: Another point so, i dont kno if San Javier really really suffer so much improvement around the cable car station. I dont know. Its just one personal opinion, but i think cable cars are a little bit too overestimated. And cities like 9 cities in latin america are biiliding their own cable cars, but they are not rebuilding their city centers, they are not integrating poor people to the City, and the peripheral neighbourhoods are just expanding to the rural areas, and i dont know, its just like, OH they have a cabel car so come to the city. I dont care. They have the cabel. But, you dont see the cable car in rich neighbourhoods.

Rune: No, thats exactly, i did som interviews before. Because i did some projects, where i aks people: So why dont you get a cable car in Poblado?

Emmanuel: yes?

Rune: and even though, i asked people from poor neighbourhoods and rich neighbourhoods and both of them were surprised.

Emmanuel: No, they have cars, they dont need cables.

Rune: Actually they dom for the polution here. They need more public transportation in Poblado.

Emmanuel: Obviously. So, but, we are. I dont know. This is like, and im working on and that. And i think, again this is a personal opinion, but the metro de medellin or the Medellin metro was built for the poor people.

05.47

Rune; yeah yeah.

Emmanuel: Because in the rich neighbourhoods, in Poblado or Laureles, there is no metro. There is no metro system. Even with the (fether) busses, the frecuency and the capacity is too little to move all these people.

06:11

Rune: No it is, because i live in Laureles now and when i go to Poblado in between often.

Emmanuel: There is no metro between them.

Rune: No i can walk 20 minutes and take the metro and then walk 20 minutes.

Emmanuel: Ah, so you are living this example. But i think this is stupid. Because why do you make this big system, because it is a (unclear) big system for poor people? Why arent you thinking about the rich people. And all those cars and motorcycles that are poluting the city?

Rune: So you think they need to include those richer areas as well?
06:53

Emmanuel: Of course. Not with cables but with integral strategies. Leave the densities and making some (parking) at the terminal station i dont know. But.

Rune: But that does also affect the Line J? Because you said it did. And there is not really a connection between San Javier? ... Not relevant

07.53

Emmanuel: There are almost 15 lines that are started and we still dont have them. And we need them.

Rune: Also in Poblado right? There has been talk about it`?

Emmanuel: yes. Also in poblado.

Rune: IS that at tram or?

Emmanuel There is not a technology decided. We have to move i dont know 125.00 trips with this line. We have to move 15.00 trips with this line. So technology is something you have to decide after. Not before the impact study and the social impact study. And the demand. So yeah, we have even more important thatn San javier is the Santo domingo zone, which makes the most trips to poblaod, but the connection does not exist. SO they have to go to the center and then take the Line A to go south and then go south. But you cant make from pobaldo to San to domingo wiht a line.

09.12

Rune: no no no.

Emmanuel: You have to take 3 or 4 lanes.

Rune: They go there to work right?

Emmanuel: yes and it is the. I dont know. The bigger.

Rune: there are more people. And more passengers?

Emmanuel: Yes, but it is like the main route in the city.

Rune: The main travel pattern?

Emmanuel: Yeah, and i have that study, which i will share with you.

Rune: Yeah yeah, i should have focused on that line. It seems like everbody has focused on that Line. What the line? Thats the first line. Line....? It seem

Emmanuel: K?

Rune: taht was the firs one. The most succesful one.

Emmanuel: Yes but there is something that i will come back to later. Which is the PUI. Its like the (unclear: prensive urban project)

Rune: Yea, i have heard about it.

Emmanuel: Well, the story is like this. Line K was in construction, or was under construction, i think, when new mayor came to the city and decided to make really high investments in poor neighbourhoods. Which is the first one, i dont know if it was casuality, but they built the cable car and the PUI in the same neighbourhood or the same comuna. And the combination was eeh, the successful case of Medellin. The medellin transformation.

11:16

Rune: The Medellin miracle, or whatever.

Emmanuel: Social Urbanism. Many people around the world looked at what happened at that time. And they dont really know what happened. They dont know why that combination was great. So, the next mayor, i think, i think, well this is, like a recipe. So lets take the same experience to San Javier. And they built a cable car – Line J – and a PUI. But.

Rune: But the PUI, what is that? Is that the research center or what is that?

Emmanuel: No no no. This is like you have a neighbourhood and you just made a (unclear) superficial research about the needs, and without making any investments in housing, you make an investment in public spaces. Like roads, parks city centers,

12.27

Rune: ah okay. But they did that in San Javier

Emmanuel: yes, they did that and then they did Pajarito, which was like the worst decision of social housing project in Medellin.

Rune: It was?

Emmanuel: It was

Rune: They are talking about the suramerican games where the sportspeople, what is it called, you are talknig about the new houses at La Aurora staion right? And they took som people in this area and they put them in there?

Emmanuel: Yes:

13.07

Rune: And why was that the worst decision?

Emmanuel: because first it was eeh, sorry, it was too far from the city center. But the other things was they acomodate there, people from too many differnet contexts in the city who were evicted.

Rune: Evicted?

Emmanuel: Yeah, like they were forced displaced.

Rune: Ah, they were forced to go there?

Emmanuel: Yes, forced to go there, no. But forced to get out of their original places in Medellin because of widenen roads and infrastructure built. So its very very difficult to understand those contexts of these people and in Pajarito you can see horses in the 7th floor and pigs in the 3rd floor and i dont know. Eeeh, many illegal activities.

Rune: Activities?

Emmanuel: Yea, and it was horrible. I think one of the worst decisions to make social housing. And the PUI didnt even work at all because there was no comunity.

There was just a lot of people living there. But there was not (?) there was not confidence or security, social integration, or interaction.

Rune: They just put them there.

Emmanuel: Yeah, and thei sis the main differnece between those two experiences in Medellin. Like Line K was great, Line J was a mistake. Not the cable car but the decision of two many buildings and apartments and people living too far awar on the top of the hills. It was from a non-repition case. It

Rune: So it is not a success. Is that a general opinion more or less?

15.57

Emmanuel: yes i think. I think its general because i dont even work on that. But i know because of all the meetings and work, and the workshops. You can listen from everybody. Its like Pajarito. Ifyou Say pajarito in Medellin its like (waah) horrible. Even for locals. I dont know if you have been there and make interviews? The locals doesnt live happy there. They are under pressure to live there.

16.32

Rune: But this happened in 2010 right? This happened in 2010.

Emmanuel: Yes.

Rune: I think they built the houses in 2010. And the metro was in 2008 i think. The Line J i think. Yeah, im gonna go there tomoorw to do more interviews. But i have been working there so i have been in that envirionment. I dont know the deeper social problems there. I dont know in that area. But when i came there i just noticed that around the station it was different from 2 years ago. It looked more. It looked like there were more balconies to seee the view and people were eating ice cream, it looke actually like, it looked nice around the station. But im not the

Emmanuel: I can tell you one thing. Very. I dont know. Its valueable to know. Mainly when you are not from Colombia or even latin america. But you can tell there. One main i dont know. One main thin g about us. People in medellin especially are very adaptative. And thats a great thing because the conditions are not the best. But wiht 2 years you are telling me. People can change. People can change their relationship with public space and with neighbours.

Time: 18.11

Rune: They don expect so much maybe? They appreciate what is there?

Emmanuel: Its more or less like that. So people are very adaptative conditions are not great so people are.. I dont know. I want to say crazy. But no people need so little to be okay. But i dont know. Its not my case. I dont live happy with this mobility situation and with noise, pollution.

Rune: So you think that when you implement. Beacuse in some way you could say that line J is a social intervention also.

Emmanuel: Yea of couse. Yea, it clear that cabel cars are social interventions. Because we were talking about the lines doesnt make any apperences in rich neighbourhoods. In the same hills. They are in the same hills.

Rune: So you would say that when you implement cable cars you need to think of a lot in other social perspectives as well?

Emmanuel: Yea,

Time: 19.41

Rune: if you want to make a solution to some of al the problems that are in the area?

Emmanuel: Yes:

Rune: You need to integrate other social interventions as well?

Emmanuel: Yes and you need to something with the space between the stations and the houses. That was th PUI success. The PUI could make a connection between the metro system and the people there. And that was just, i dont know: Timing design, and sensibility, of those poeple working there, which makes Medellin famous around the world.

Rune: So that means that even though its physically connected, they are not really, in som way they are not really integrated with the city anyway?

Emmanuel: Yea because you, you have to admit that there are some local knowledge and local needs, that science or academics r technicians and engineers doesnt know. They dont know how to work with that. So you have to ask people what they need, what they want, how they live. And that was, that was inportant in the first exeperience of the PUI. So i dont know, identity, is important.

Time: 21.18

Rune: Yea yea yea. So the metrocbale is not really integrated with the San Javier identity as the firs tone was?

Emmanuel: Yea, at that is one right lecturer of that. I think there is so much problems that we have not solved yet there. But with Line K it seems like everything is going great. So i dont know Rune. No, ask me more questions?

Time: 22.08

Rune: What about the military intervention. Can you see the cable car as a military intervention to pacfy the area? Because before it was full of guerillas, stiff loke that, so it could also seem like they implemented it, the governement, or, to pacify that area of to take control of that area?

Emmanuel: Well, i can tell som ideas, that i have heard, about that that are creaxy but intersting. That says, that people there feels like with the cable cars going over there heads, they are being watched, they are being observed, like the big brother or something like that. So symbolically, eeh, there is some, a sort of controle of the behavior between the metro and the government. Its like you know, we ave a public, a public.. Thats another story. Do you know EPM? Empresa publico de Medellin.

Rune: Yes its the building with the grren stuff

Emmanuel: yes but its not the building. Its the Empresas publico de servicios. Water, energy, waste.

Time: 23.50

Rune. But the stratification system also, they also work with?

Emmanuel: Yes, they work with. But they are not deciding.

Rune: Okay.

Emmanuel: And they make a strategy to avoid, i dont know. Peole can bypass the mainnetwork and get free energy, free water. So they think about an symbolic

strategy. And they change their slogan. And they write "estamos alli" which is "We are there". And people stopped to steal the services. People stopped bypassing the network. So with the cable car..

Rune: Where can they see this slogan?

Emmanuel: EVERYWHERE!

Rune: oh, so they write it in the neighbourhood?

Emmanuel: No, no, no. In the billing, in the cars, in the publicity, in the metrosystem. Its like. EPM. We are there. Or "We are here". So people think they are here "i cant steal energy anymore" (when) they are here. I was telling that because it think it is something very similar with the cable cars in the neighbourhoods. They feel like they are being observed. So yes, those are, without thinkin about it, those are another kind of security strategy. Because, yea i like, (?) camaras or messages or beware of the dog or being watched with a fake camara.. etc.

Time: 25.57

Rune: or just that people are travelling right above your house all the time. So there are poeple looking down in you..

Emmanuel: So there is a sense of secutiry around the cable cars.. And, i think the other.

Rune: But that can be good and bad, right?

Emmanuel: Yes. And i understand. But i think there is another issue which i think is mostly positive, which is tourism. So you can see toursits everyday, any day, in the cable car buffer. So you go to San Javier or Santo Domingo and you walk around, and you find Argentinian people, Americans, Europeans. Taking coffes, taking pictures with camaras, so i think that is almost another security strategy. Because people there have found new sources of making money. So they eeh, work on selling souvinirs, food, drinks.

Rune: And also it is culturally integrating the area with the rest of the world.

Maybe there are more foreigners going there than Colombians from El Poblado.

Emmanuel: Im sure that is.

Rune: So even though it is disconnected from Poblado...

Emmanuel: I will tell you something. Its a little bit funny. Because i work in those complecated context of pverty and insecurity. And you, when you are working there you notice, and when you are a part of that, you notice that there are so much tourism there. In Moravia, in San Javier. In San Cristobal in La Aurora, but in the Laureles, you can see people: Europeans or Americans living there. Because there are nice places to live. But there are not tourism around there.. Or Poblado.

TIME: 28.48

Emmanuel: You aee all the tousist are in the north, and they know about Medellin because of the inteventions there. Not because Medellin have luxury suites in the South. Miami has it (too).

Rune: You could én say that one of the most succesful urban branding strategies is through mobility here?

Emmanuel: Yes. Because Medellin was the most unsafe City in the world. In 1991. 7000 deaths. Violents deaths with guns.

Rune: A year?

Emmanuel: That year. 7000. And then, Medellin was the Latinamerican Capital of transportations systems. What? What happened with the Medellin. Ah the metro systems makes there and there and there and the Metrocbales and the Tram. And the Electric Stari in San Javier too, in 20 de julio. So yea, through the transportation system, through the metrosystem, Medellin could change its image globally. And it is a nice step forward for the city. But there remains a lot of work to do. And some people think that Medellin is already a major city or a mature city. But it is not. Medellin has too many problems already, they need to work with. But yes, the transportation system have changed it.

Rune: So the problem could also bet that, because it was so succesful, it leaves people thinking. It makes people,.. maybe the governemnt uses this branding more than continuing the good work?

Emmanuel: yes, there was two periods. Which are 8 years. Where Mayors was just selling the brand. But not wokring on the land. So it is frustrating because, yea, 20 years work and now we are in succesful times, and now we are celebrating or something like that, and we are selling the city around the world, and we were the most innovative ciry in the world, we was with the (?? Award in Singapoor, and we was almost the olympic youth, but we lost over Buenos Aires. Because it was the youth Olympics, not the Olympic Games. And, but in territory were still growing and solutions doesnt arrive. So yea, Medellin is half real change and half brand. It is important to notice and yeah.

*Time: 32.45
irrelevant:*

Time: 34.10.

Emmanuel: so Medellin stil have a lot of work to do.

Rune: They have been sleeping a little bit?

Emmanuel: Yea.

Rune: since they got a lot of attention for the change they have made.

Emmanuel: Yeah, and a lot of prices and a lot of aknowledgements. Its okay. Its okay to be happy wit the new city but it is better to work continuesly to make it a even better plave to live.

Rune: I have some more quations if it is okay?

Emmanuel: it is okay.

Rune: Relating empowerment... i

Breake:

Time: 36.30.

Rune: It sounds like the ysmbolic integration has been pretty good in San Javier. Like with all the tourists coming there. Like you can talking about the diffenrece between like actually people travelling in between. If you talk about people San Javier.. As something disconnected. So the integration wiht the rest of the city. You could say that thats, there could be two perspectives. Like the symbolic integration - the idea that people feel integrated with these area, and also that people travel in between the two areas?

Emmanuel: Well, but dont know. Beacuse the cable car in San Javier just for me ot goes from the metrostation to up the hill at La Aurora. But the other system, the electric stair, they are like integrating more... The commuity, because there are eeh, near to the station, they, i dont know, a lot of urbanism there, but the cable car.

Rune: It creates more interactions between people?

Emmanuel: Yes.

Rune': From different areas.

Emmanuel: And a lot of tourism plans. Like the graffiti tour. Have you already tried it?

Rune: Yes i have heard about it.

Time: 37.55

Emmanuel: So people can take a metro and then walk.. just walk and be in the city. With the cable car they dont. And the stations have not so many reasons, or so many attractive places, to go down. If i take that cable, i just take the cable and go down to Aurora and then take a bus to San Christobal and then no more. With the stair and with the sattion there in San Javier you can be like more and emersive visit to the..

Rune: More like a cultural ecxchange, or more like interactions, it gives mre a fundament for interactions.

Emmanuel: yes i think that is.

Rune: Its more an open space where sitting in a cable car is a closed space.

Emmanuel: When the cable car was unders construction, the the territory there was mainly rural, so you can..

Rune: It was? Not in San Javier? In the end right?

Time: 39.06

Emmanuel: There are 4 stations you say? So the last 2 stations were over green hills.

Rune; The last two station??

Emmanuel: Yes, and then..

Rune: So they actually created an area out there?

Emmanuels: And that is the other probelm with that. There was no poeple living there.

Rune: behind the mountains?

Emmanuel: yes, a lot of people wanted to live there because they think that it is, that is you second or third question, they think that when there was a cable car the land would be a lot more expensive. I dont know the figures, because i dont speculate with that land, but i know that for example: There was an empty land, an empty lote (Spanish for land). You make some, i dont know, house or whatever construction and then you sell it. And with the cable, a lot of people made that. And then they began to rent the land there. Because they were waiting the prices to go up. So yes, but i dont know the figures.

Rune: But a lot of the houses behind the mountains are also informal?

Emmanuel: yes but informatlity is expensive in Medellin. Beacuse informality is, i dont know, its like informality is normal in Medellin, informality normal in the hills,

informality is normal in the periphelly (areas). So, even without paper, even without legal lands you have to pay good money.

Rune: So who do you pay to? The government?

Emmanuel: No, to the bands.

Rune: To the banks??

Emmanuel: No, to the band. Like gangs.

Rune: Ah to the gangs. So a lot of the gags actually owns those areas.

Emmanuel: Yes. Because the, one bussines is with the drugs. But the other main busines here is with the land. And the informal land. Because you can rent and you can sell and you can extort, how do you say that?

Time: 41.58

Rune: yea, you can extort people.

Emmanuel: Yea, and that is how that work. It is a difficult context there. But that yea it is our reality.

Rune: Its very complex. There are a lt of different perspectives.

Emmanuel: Yes. So they ar still being little wars and deads, maneces, but medellin is still working forward. And people dont want, generally, a war, But there are still a good busines. And with land there it is a business. But again. I know. I work with the people that work there. But i dont know the figures. I cant tell you: its doubles its trippled, its been 10x with the cable car.

Rune: But is must have been people with money who came there. Because they had dreamss about investing?

Emmanuel: No,

Rune: I dont know. Could they just take the land. The gangs?? Did they just take the land or did they pay someone? Like after they built the cable car?

Emmanuel: No no, they took the land. Because the land in the hills with 45 degrees are public space. You cant habitate there. You cant build housees there. You cant build parks or sports centers... (?)

Time: 43.46

Rune: So they created more informal areas actually with the cable care there?

Emmanuel: Aah, thats the problem with the cable cars. They allowed people to go there. Because before the cable cars you could not get there. You could walk there. But you could not get there daily. Work in Medellin and live there: It was impossible and it was impractical. With the cable car you can get there. So once you can get there you make a business there. And people go there. And cablecar allows that. I think cable cars promotes that. The informality grew.

Rune: Crazy.

Emmanuel: Crazy, yea. Because, im a difficult person in this topic.

Rune: No, its good.

Emmanuel: I fight with some colleagues about that. Because i know with figures, wihtout and wiht cable cars popuation grw differently. So you can look to. I dont know who has the data. But i have seen maps, i have seen even google earth. You

can see the growth around the cable car lines, and other territories without a cable. So i depend that cable cars are making informality bigger. Because its not far away. You Can get there.

Time: 45.32

Rune: As far as i know informality is the biggest problem for the Colombian economy. I read that the IMF, said that the biggest problem for Colombian is informality, 50% of the economy is informal.

Emmanuel: 50% or 55%. So yea, think about it. We

Rune: So if they are promoting informality? They are actually promoting one of the biggest problems in colombian economy.

Emmanuel: I think that. Truly promoting, i dont know, but..

Rune: No, but maybe in some ways?

Emmanuel: Yea. But they are allowing it. Because you can just clean (the public space) and build a wooden house. And you can get there because you have the cable car. And it is difficult. Because you have some problems that you have to solve. But you have to think about what the future problems will induce with that solutions. And i think too few persons are thinking about it. Because they are too happy with the success of the cable cars.

Time: 46.47

Rune: They are blinded by the success?

Emmanuel: Yes, they don't talk about. Well we were looking to solve 100.000 people's problem and now we have a 2000 (200.000) people problem. So what are we doing? We are making the problem even bigger. I don't know.

Rune: Yea in some way:

Emmanuel: For example: Cable cars – first year, the first 5 years i think. IN 2004 to 2010. It was great. Then, you have to wait 45 minutes, one hour, in the station. Because there was so many people living there and the capacity is limited.

Rune: That is Line K right? Because i think with Line J, in the beginning there were not so many people using it.

Time: 47.51

Emmanuel: Because there were no people living there. So that with the time. In short time. In the middle term. (years, 7 years. You end with a collapsed system. So where is the solution? We have 267 parking lots in the city..... Irrelevant...

49.04

Emmanuel: That is one parking lot for every fourth street. And we don't have any social housing project in the center. So that's the reflection about that. You have made cable cars (going) to far far away, and you have not control of parking and housing in the center. We need people to live in the center again. We need to revitalize the city center. But we are not working on that. And that doesn't happen if you only talk and talk about it.

Rune: Its like th heart of Medellin The city center. But its not. Something is wrong. You can not go there at night.

Emmanuel: exactly: I think 1.5 million person go there everyday. Everyday. Almost 2 million trips there. Everyday. And nobody living there.

Rune: yea, that crazy.

Emmanuel: Thats crazy. And in the night you have this massive walls of parking lots and darkness.

Rune : you can talk about is as a non space. I dont know, som people in mobility theory, they talk about about airports like non-space. Where you only go through.

Emmanuel: No no, its the best classification (non-space). Or the best definition of those parts of the center. There aren o places or no spaces.

Time: 50.34

Rune: thats crazy:

Emmanuel: So, again, it is another topic, but it has to be directly with cable cars because, cable cars are like solutions, temporal solutions, that doesnt allow us to se the main solution

Rune: But they are connected. But with what? The city center is not a pace to live, or is it not really. It is a non- place.

51.55

Rune: so could you see, in some way the cable car as an example of how you connect, eeh, the different, in some way, if you look a little bit in a positive way as well.

Emmanuel: I dont know about the scale:

Rune: Its not the scale. More like a small example of the effrot of try to connect. Because you know the government i very right wing, the left wing people they have been fighting the last 100 years.

Emmanuel: No no, i understand. And i will say this. Cable cars are great technic solutions. Cable cars are well intentioned to connect people to the city. Cable cars are working great in Medellin and in Bogota, Manizales, Pareira, Cali – in Colombia. 5 cities with cable cars, in Latin America other five or six. But,

Rune: There are still all the other problems:

Emmanuel: Yea, i think they would be better solutions if they were conneced to a integral pack or a integral portofolio of public interventions. I think that there is a lot more that cable cars could be connected to.

Rune: Ah okay. So the potential is way bigger.

TIME: 53.24

Emmanuel: No the potential is incredibel big in Medellin. Medellin can change its threats, if technical and political eeh, idea make together and work together. City is ()is a small city.

Rune: Colombians say its a small city i dont think its a small city. I hear it al the time. Its a huge city.

Emmanuel: Think about it, we have only 7 km. In the, in the wide side of the valley and 30 km in the long side of the valley.

Rune: its a lot, in my city we have, where i come from its 300.000 people.

Emmanuel: yea i know. I will so so happy. Latin america is ridicoulos big, compared with the european context, but medellin is not bogota. And medellin is not Sao Paulo og Ciudad de Mexico. Medellin is smaller Medellin has some walls, natural walls, that eeh contect the city. So solutions will be easier here than Bogota or Sao Paulo or Mexico city or los Angelos, i dont know. But they, potential is very high. But politically and technically we are working in different sides of the balance and we are like oppositions. I dont kno w what is happening with politicians and popular solutions are the most inefficient.

Time: 55.40

Rune: So things like poverty and identity needs to be incorporated into the whole design of the cable car?

Emmanuel: Yes of course. Yes, and, and other tjings like the motorcycle controls, restrictions and so on. Because public transportation her is really suffering wiht the motorcycle acquisition of users. So,

Time: 56.17

Rune: People feel that it is faster?

Emmanuel: People does not feel it. People just know it. Experienced that everyday. Its faster, its cheaper.

Rune: But there is a lot of polution, right?

Emmanuel: Yeah, and it is higly unsafe. But people doesnt matter about it. People only matter about money and time. And when they say time is money so you are just thinking about money and money.

Rune: So the ethical reflections come, its not the primary.

Emmanuel: No, not here.

Rune: but the nits cheap to go with the cable car, no? When i go from La Aurora to Poblado station is pretty cheap. 2000 pesos (4kr ca.) 2300 right?

Emmanuel: Yeah, but how mamny minutes?

Rune: it takes some time.

Emmanuel: Yea, in motocycle it takes i dont know. 35 minutes, max. So people is happy just going full speed.

Rune: So there is a challenge making people from all classes using the public transportation?

Emmanuel: yes.

Rune: But also there aren o more space in the metro?

Emmanuel: There are, as i was saying, 15 nes lines to be build. SO, yeah, metro has not more capacity, that line. But we are studying and thinking about another parallel lines, and the closure of the network. So we have the A line and the 2 or three parallel, and then we have the other line to connect them, so like in Paris or London or Buenos Aires, we actually ave to make a Network. We cant go for what, two lines? We neet more metro. We need more lines.

Time: 58.28.

Rune. Ive sen that they just start closing the door. In the metro. The driver just close the door. Like people try t get in and he just closes the door. I think what they are truini to do is, they dont want too many peopel standing like this (very close) because they just continue going in. And he just closes the door and people try to get in. But its good because some people wait a littl bit more but then you can breathe inside the metro.

Emmanuel: yes.

Rune: I noticed it, and i though it was maybe a strategy. I dont know.

Emmanuel: ANother strategy is like the schedule her is anacronic (tidsmæssig uoverensstemmelse). We work all together at 8 am and we go back home at 6pm. So peak hours are unbelievable congested. In the metro on the roads and busses and everywhere. So we need to think about eeh, becoem a real main city. Because out schedele is like a small town. And a small town doesnt have 4 million persons. So the city, the business, comerce, the academy, the sectors.. All the economic sectors have to think about how they are will adapt to a new schedul format. And make, maybe a 24 hour city. Because it is easier for everyone. But this city close at 9pm.

Rune: Yea, not the resraurants.

Time: 1.00.18

Emmanuel: Not all, but mainly the city is closed. You dont have much to do at 10pm in the streets. So transportation is suffereing that. Because it has to response in those specific peak hours and it has not any more capacity. And that is eeh, important especially for the cable cars which are the lowest, which has the lowest capacity.

Rune: it is not easy to put in more metros. Ive herd they just put in 26 more metros last year.

Emmanuel: yea, trains. And two stations in the south.

Rune: so the capacity soucl be a probelm at Line J as well?

Emmanuel: but, if you are telling mo not a lot of people are using that, or not a lot a people are living there, so i didnt know. But could be. Could become a problem. Yeah.

Interview finished:

Expert interview No: 3

Date: 11th of December 20019

Name: John

Title: Operator at Metro de Medellin

Location: San Javier Station, Medellin

How do you experience San Javier after the metrocables were implemented?

"There are really safe in the area. You can talk to the people that makes the grafitti tour on 2o de Julio. Before you could not go anywhere. People were scared, and it was very different from what it is now. Not only with the cable cars, but also with the escalators. Have you heard of Operacion Orion?"

Yes i have.

Okay. They know a lot about it on the graffiti tour.

Are you from this area?

"Yes. I have lived here since 5th grade and i am 32 years old today. The area as been though a huge change since the time i arrived here. Now, it is full of tourists and the streets are safe".

Expert interview No: 4

Date: 20th of December 20019

Name: Edwin

Title: Operator at Metro de Medellin
Location: San Javier Station, Medellin

How can you explain me your understanding of what the metrocables mean to the people of living at Line J?

So, Edwin basically make a synthesis of what is, what the metro and the system brings to the city itself. And to all the communities. And what he explains is basically that in every community where the metro have a (branch?), like the cable cars, the tranvia or the metro itself, they bring life, lifequality for the people. Like besides connection people , transporting people or moving people around the city: what they wanna make, or what they bring to the society is a social change. So, eeh, thats the reason they try to reach the most dangerous areas, like the most violent areas in the city. And its because after they arrived the people started getting more consciuos, or they started believing in change, and they started doing other things. And even the criminal levels they started getting low. So what he basically says like: The thing that the metro and the whole systems brings to the people is life quality. Like people is more safe, people feels more there life is better, and they started, that there is a power of change, so its like a social transformation in all the areas.

Expert interview No: 5
Date: 9/1 of December 2020
Name: Carlos
Title: Operator at Metro de Medellin
Location: Juan XXIII Station, Medellin

Translator:

"Before they started construction the cable car they had to check the lands, they had to speak with the people and basically what they do is that they start asking about what people think about this project and then they starteddoing a social company, they were making activities for the children, they started building libraries, they started building not only the cable cars but also outside of the areas.

Rune: So that is connected with the implementation of the cable car?

Translator: Yes, exactly. Before they do that they started build thing that would help the comunity as well, and its part of the integration. There are three things that are aimed to the metro – its safety, making a cheap way to travel, and also like the company here, because for ecample for people with low, like reduction problems to walk or like.

Rune: Disabilities?

Translator. Yes, Disabilities. There are always taking care of them, like, if someone needs to be helped getting down of the cable car they can annouce when the person get inside the cable car, and then they are waiting for them on the way up, and, so there is always someoen if you need help, you can, hes taking care of you if you have

any trouble. And also, ahm. Its safe because for examle if you loose something inside the metro they will keep it for you and they save it and try to contact you.

2.54.

People are always taking care of you. Its safe here. Its cheap and its actually, for the community itself, you feel the inclusion. Because for example they bring like space for computers, internet, they try to connect the people, especially kids or young people, just to reach other opportunities. Ahm,

Rune: So the wifi is also connected to the stations+ So the its a way of socially coonecting people?

Translator: Yeah, basically its like that. But not all of the stations have it.

DONE:

Expert interview No: 6

Date: 17/12/2019

Name: Lina

Title: Real Estate Agent at La Lonja De Propiedad de Medellin

Location: La Lonja de Propiedad

Do you have any knowledge about the development of the houseprices along the route of metroable Line J?

"we have not information on prices on the area because most of the constrictions are non formal, so they have never been registered in any notary office or the registration department."

What about at Villa Suramericana? Do you have any price information about that are?

"About la Villa Suramericana, that were living units assigned to low income people by the government. It turns out that we don't have information about those either, because they can not be sold or rented to anyone but the person who was assigned to in the first place."

Expert interview No: 7

Date: 9/01/2020

Name: Simione

Title: Social worker and hostel owner at Juan XXIII

Location: Social organisation called "La Cancha de Parilla" at Metrocable Station Juan XXIII, Line J

Rune: But you live here?

Simione: Yes i live here.

Rune: How do you expereince this area+ is it safe, or?

Simione: *"It is totally safe. Totally safe. Untill 2006 or 2007 it was very dangerous. Like 10-12 years ago. And from these cable cars the place totally changed".*

Rune: *"How long time have you been here?"*

Simione: *"I have been here first time 3 years ago"*

Rune: *"What do people say about the metroables?"*

Simione: *"I mean they are really, so this cable changed their life. Because this cable helped them a lot because meny of these people work in the city. And they have to come back everyday. And most of them dont have cars or motorbikes. So they just have to walk. So the cable car saved their life".*

Rune: *"Ah okay, so they are very greateful for it?"*

Simione: *"Yes, they are very greateful for it"*

Rune: *"What about the whole military perspective? Because i know there were also some military interventions.*

Simione: *"There was! There was! A big military intervention in 2002.. Orion Operacion, but after that, no, the thing was really changed. And now, the comuna is unders control of police of course. And on the top, on that side, there is a miliatry home.*

Rune: *"Yes, i just went there. Because im interested in the military perspective as well".*

Simione: *"Yes and they are usually happy to walk every time in the day. And just control"*

Rune: *"So the relationship is good? (With the locals)"*

Simione: *"Really good".*

Rune: *"Because thats what we saw as well. That they were giving knuckles to the kids"*

Simione: *"Exactly, no its really cool this. No, eeh, kids say bye to the police, no its really good".*

Rune: *"But i know som epeople here that feel like, at that time, the government was a little bit too aggressive.*

Simione: *"Yes for the government. All the people that live in this area is criminals. Its just. Normal to think about it. But its not true: You can see. You can walk with your phone and you camara. And nobody can say you anything. Just maybe they stop you and start to aks you where you come form and why you are here".*

About informal construction at Juan XXIII

Done: *The government let them do it because there was not a way to make a rule about this. There was just a lot of people moving from the city to here. And the government let them do it. And then, because for them, it was a way to get money, because they gave every kind of things you need at home like, water energy, internet. And the government takes money from this but no, there is no people here that ask for a permission to build a home. It snot. The dont need.*

Rune: *So from you experience, you dont need to get any permission to built here?*

Siminoe: *No, if you want to build a home for example and you see a piece of land, that you like, you need to go to the owner of this land, that probably can be the neighbour, and he sells this piece of land and you can build the home. But you dont need to go to the government to ask, to build. It.*

So how did he (teh neighbour) become the owner?

In comlombia, after 7 years that you have a piece of land, and nobody comes to ask for this piece of land, you become the owner. And you can ask to the lawyer to make a paper that show that you are the owner of this land.

Rune: So after 7 years you become the owner?

Simione: Aftyer 7 years yes.

Rune: But that does not really count here. Because it is more than 45 degrees here. So it is illegal? No, it doesnt really count here because actually it is illegal here according to the law to build here.

Simione: Yea, of course its illegal. I mean the land...

Rune: So this is more the informal rules?

Simione: Yes exactly, but why they can do it is because the governement dont care what happens inside the comuna.

Rune: They accepted it?

Simione: They accept it because for the governemt all the peopel that live inside the comuna are criminals.

Rune: But you didnt have any problems with criminals or gangs?

Simione: No no, because everybody in here is in the same water, we say that in italy, we swim in the same water. And its like, there is a law, that we didnt write, no write, here in la comuna. So people leave the criminal quiet to do their job, and criminals dontcare about what people do, and they can live together wihtout fight. And they konw each other, who they are, and eeh. But its just quiet living you know. You dont disturb me and i dont disturb you. For example, like ive said before, if the guys from the gang want to play football, they come and ask permission to Yenny to play, and they can play to hours and then live...

"its the same thing when first i opened the hostel here, and every people before i came told me, ah you have just to wait three days, and then someone knock on your door, and he will ask some money, because you are going to have abusiness inside the placer where they are the owner. So ive been here for 8 months and nobody knocked on my door.

Rune: Okay, cool..... How do you experience people talk about the cable cars here? Is it something people dont talk about?

Simione: no, i mean they dont care, its like. Its normal for them. It was a big shock 10 years ago, when the government did it. But it was not a big shock, that this

helped the citizens a lot, because i dont know, probably half of the people that lives here work in the city and they need to move. Many of them neede to move by walking, because there was a bus, ofcourse, but it was not too much (enough) for all the people that needed to move. And metro cable have helped a lot for them to go to work and come back. Because to go down is easy. The difficult thing is to come back. And walking i dont know hundred of hundreds of stairs.

Rune. But the station is t kind of like a center for this area? COuld you call it like a center? For this area? Its like a meeting point?

Simione: Yes its kind of like a meeting point, yes. And the other two stop are the same. And ther too its the same as here. And of course its the point where every people go and come back and pass from there.

Rune its kind of like the center fo this "town?"

Simione: yes.

Expert interview No: 8

Date: 13/01/2020

Name: Edwar Calderon

Title: Postdoctoral Reasearcher at URBAM, EAFIT. He recently finished a postdotoral research project about gentrification in Chocó, Colombia.

Location: URBAM EAFIT

Theme: Gentrification caused by the implementation of Line J.

00.00

Rune: So you have been working with gentrification?

Edwar: Well, not exactly gentrification, its displacement. Gentrification is displacement yea yea. But im working with displacement by conflict. By the armed conflict of Colombia.- And the recentlin of the displced population in Medellin. This is what i am doing right now. I mean i have differents fronts of work in terms of research but this is my main one right now. So gentrification, i just published, ahm, not just myself, its a group, we published a book last november its called urban marginality. I would receommand you to get that book if you have a chance. Urban Marginality and it is based on gentrification in Latin America. So it was a book betwwen some scholars in the UK, and in Mexico, and i contributed with a case here in Colombia. But not Medellin. In another city.

Rune: Okay, because what ia m investigating is Line J in San Javier.

Edwar: Line J

Rune: The metro cable Line J.

Edwar: Oh, ah okay yeah, Line J.

Rune: So thats the are where im focusing on. Im fcusing on the 4 stations where, San Javier, Juan XXIII, i dont know if you know them?

Edwar: Yeah, i know them. I grew up close, not grew up but i lived 16 years in La Floresta.

Rune: Ah, okay. I was just in La Floresta. The park. There is a park as well.

Edwar: yea, i lived there for 16 years. In an area called se casares. So im familiar with San Javier and... But at that time, i mean, i have seen the whole change of that area. So for example Juan XXIII, i have been, i was there 20 years ago, 15 years ago, when this cable didnt exist. It was a completely different story. And Juan XXIII was this are that was quite difficult to get, because there was a lot of militsia around there.

2.23

Rune: The military?

Edwar: No, militsia it the. At that time it was not paramilitary, it was more like branches of Guerilla, in the city i guess, around that time. It was really, i mean, it was not the place that you wanted to go if you were not a person from there. Or, if you, you couldnt go there if you were not with someone that they knew, it was very dangerous. And eeh, it is a completely different story. Now it is a, when i go into the metro cable, seen from the air, places that i was 20 years ago, it is a very interesting perspective.

Rune: So its was actually, you could say that it was kind if the civil war was closer to the city at that time? Because if it was left wing paramilitary groups that actually has the power right outside the center of Meellin, because it is not far away from..

Edwar: So you are talking about Orion?

Rune: Yea im also talking about that, im also investigating that.

Edwar: I mean, what year was that?

Rune: 2002.

Edwar: 2002 yeah. Because i was still lliving in Colombia. That was a very diffictul time for the comuna 13 because it was the time when the paramilitary groups were getting to the territory by, you know, by war, by force, so yeah, that was horrendous, it was horrendous. I mean the shooting with big guns. I mean im not just talking about here (comuna 13), im talking about a big deal in the city. It was horrendous.

Rune: It was kind of like a war?

Edwar: It was a war! Litterally a war. Because i remember in my university, Universidad Nacional, in Medellin, my degree, and eeh, There is a branch of universities in Robledo. It starts in Robledo its more like the western part. And i remember this story about a girl who was i n a class. She was in a class. And the shooting was more than a kilometer away. Almost. And eeh, a bullet went into the classroom and killed someone. In the middel of the class.

04.55

Rune: Ah, crazy.

Edwar: Yes, that was the city and eeh. Yeah the shooting ... i was not living in the area at that time but i, but you know, the whole city was witnessing what was happening. It was horrendous. And still there is a lot of dissapeared people that are missing. You know the story?

Rune: Yes ive been to the cementary where they were grieving and they were doing some activities also and they put some, they would plant flowers and write their names on of the people that disapeard

Edwar: But how you, im pretty sure you have heard about the escombrera

Rune: No, what is that?

Edwar: Esconbrerea is basically a place where people throw rubics eeh,

Rune: Garbage?

Edwar: Not garbage, eeh, recievel from construction. How do you call it? Eeeh..

Rune: Wel its just the leftovers from..

Edwar: Leftovers like the concrete, stones, things like that, sand... So there is a place there, that you know, the people throw all of this and eeh,. You know when i was talking with all these people that were leading that project that you were just mentioning about the cementary they said: there is a around 250 missing i fim not wrong. I could be wrong with that number. But a lot of people missin in that are. And they say that the bodies are there. So, yeah.

Rune: Also an interesting perspective is, that the, i dont know if it is the truth, but that the metrcables is also part of pacifying the area, like part of taking control of the area, for the government.

Edwar: Is this what you think or this is what you see?

Rune: I dont know. Thats just what it could be.

Edwar: Is it something that you read?

Rune: No i didnt read it. Its more like. If you put in a lot of camaras in the area, they put in these cable cars. And of course it is to connect the city. But also you are taking control of the city. And thats also good in some way, you could argue, i dont know. Its just in, when operacion orion was (conducted), president Uribe, who was the preseidant at that time.. I dont know if he was the responsible person behind it. Im pretty sure he was.

Edwar: Well, they say that. I mean who else you know. Because basically you know the paramilitaries creation in the this country was a process that he lead. The CONVIVIR and you know the story. Yeah i mean. This is what the people say i mean. I dont know. And ehm, but what are you studying exactly?

08.02

Rune: Mobility.

Edwar: Mobility? But are you an architect or?

Rune: No, actually im a social worker but im studying mobility. Lik emy master is a engineering master but with forcus on mobilty. So its like urban planning with focus on mobility. But i focus on the social impact, and the whole story about the metrocables.

Edwar: Okay, so. Im mean the.. when you say control, i mean its obviously twhen the state can not access to the territory for different reasons: One is security reasons, you know there are a lot of gangs a groups, and armed groups in the sector that controlse the territory. And the second is because there is not even infrastructure you know. You have been there. So there are areas where there are no, there are no streets for example. The only access is through steps, right. So there is no patrol, there is no possibility for the state to make presence (?).. Of course you know when you gurantee the access then, yeah, then you have certain control of the area, but yea this is probably one of the purposes of the in all of these transport systems you know. Becaus the main reason for that is inclusion, social inclusion. For me this is a very positive way, or result of the metro.

Rune: But it is clear that it is positive. When you read what happened and...

10.04

Edwar: No, i mean. I will tell you an example. I have a friend. Or i had a friend. I haven seen her for 8 years. And she is a school teacher you know. Teacher of litterature and language, and she, i dont know do difinate it, but she used to live in San Javier, and she used to teach in Santo Domingo acevedo, close to the other cabel car, close to the library, close to this embarrassing labrary. You know thr Biblioteca Espana. You know waht i am talking about?

Rune: Yes i know.

Edwar: Okay, So she used to work there. And i remember talkng to her and she used to take one bus from San Javier to the city center and the another bus to, from the city to the place of work. And i am talking about probabely commuting a couple of hours more commuting, each way, you know what i mean? So one the metrocable start operation, so she was very happy because you know she was just taking the, close to her house, the metro, the line B, and then take the metro, and then the metro cable in one system. Apart from the amount of time she saved in her life, there was also to the money. Because it is just one ticket. You know you can change one system to another. So bit she is a person who was not living in the territory, she was a person who was external person, but her place of work was there. That is the opposit of what usually happens. Yo people live there and there plave of work is there, you know what i mean?

Rune: Yea.

Edwar: So she was very benefit from this project. So imagin he effect on the people that for example work here, in poblado, there are here. There is a huge amount of commuter from that region, sorry from that zone or area, to this (poblado) zone of the city that goes to work every day. And you can see the metro is packed.

Rune: Completely

12.21

Edwar: So, lets say a low income family or low income parents were working here in construction or cleaning or whatever, work or sales or. Usually they used to take bus, then another bus, and mayb 2-3 busses to get to work. Ah, and then with this systme they just buy one ticket so the major impact was for them. You know. This is what i said. There is quite a possitive side of that, although i have my research about what is happening right now with the metro. You know in rush time the metro is completely collapsed. Its collapsed all the time. The long queues. People have to wait in long queues outside the station even though it is raining or 30 degrees or whatever. So right now i think the system is quite collapsed.

Rune: They need more traines?

Edwar: More traines. But Ive heard that the electrical capacity is no, and this is why it sometimes breakes down.. The cable or the trains.. because the thing is they send.. This is what i have heard from the enginners, right. The trains have a, between them they have a, little period of time right. Lets say they have a minute or two, or 5 minutes whatever. But they say if we send a train every 2 minutes, or lets say the double of the trains that they are using now, the (catenarias?) that is this kind of, i dont know. Im not an electrical person. They dont have the capacity to have all these trains running so close there. So the system collapses or breakdown or whatever.

14.17

Edwar: So apart from that. A system that is linear, and fed by, you know, perpendicular lines, just fit in people, thousands of people into a system that is linear, it doesn't work. I mean i don't metro in the world that which is like that. Of course.. So a system should have like a circular or a oval or whatever or have more lines in order to.. Anyway im not an engineer in mobility, but this is my appreciation as an urbanist.

Rune: It makes perfectly sense what you are saying.

Edwar: So yea, but i mean. It has a lot of positive connotations in terms of accessibility of people, saving time, saving money. But saving time is in a question mark right now. Right, because when thi collapses or whatever. Ah,

Edwar Aah, public spaces now. This is around the stations? This is the topic you are interested in now?

Rune: Also that.

Edwar. What is happening, you now renovation or urban renovation or whatever is happening in all of these areas that used to be very deprived, right? So there are a lot of certainly public spaces nicer or, owhere public spaces where un-existent.

Right now kids are, you can see kids playing in the ground, people sitting, young people just interacting you know in some small plazas or benches. But on the other side of the coin, ah, this ah, stimulated the creation of local businesses. There are, if you see it very, like an overview, without much question or much analysis, you see: oh this is good. You know they can, locals are having their own businesses, or this is creating a local economy - its good, right?

Rune: Yes yes.

16.33

Edwar: But when you start digging a little bit deeper, whats going on in the neighbourhood, you start seeing that, this, and this is my appreciation, this you now like a stimulation of local businesses and, is increasing the values of the properties, right. So you can see for example in Comuna 13. In one of the last visits that i had there, that properties increase 2 or 3 times the price they used to have before the interventions. But also, theses businesses went away, when landovers started taking advantage of them. The tenants. So, if you are the owner in one of these houses where in front of your house there is some new infrastructure, or a station or whatever, you start seeing that you can imediatly benefit because you are going to have a flow of tourists all the time. And if you open a business there, almost the success, depending on the business but, most of the mare successfull. You know they have a lot of income. I remember asking, i was in a visit, it was last year, there were 52 mayor from the beat, in englis it is The International Bank of Development, in english, what is the abbreviation in english? Anyway.

18.21

Edwar: And eh, i went on a visti with them. And i remember this person selling ice creams. And it was a family business and they said that they sell around 800 ice creams a day.

Rune: Thats a good business.

Rune: That a good business. In comun 13. Im talking about comuna 13. So when you see that benefit because all of these interventions you think " oh my god it was

great". But what happened, if you are the landlord, you get the property, your land increases in value, and if you don't live there there, the tenant, and this is where the negative connotations of this project; So if a tenant was paying, let's say 150.000 pesos, like 50 dollars a month for rent, and after this, the tenant was asked for 400.000 pesos of rent. It's almost three times the price. Just because the landlord knows that the tenant can have a business. Or can afford that. But what happened when the tenant does not have a business. So many people have, this is gentrification, many people have to displace themselves, they have to move because they could not afford the new rent. Right. Many people are taking advantage of this kind of situation, you know. You can put a business or you can't afford the rent you know.

20.01

Edwar: So this is my question, and I can remember that I raise the questions to the director of the EDU, you know the EDU, right? ((?) dearrollo urbano). So I raise these questions for these mayors, right, and I call it microgentrification, just to give a name to that. And I ask him, if he noticed that all of this infrastructure projects have been creating processes of gentrification inside the neighbourhoods. And he said yes, and I said what are you doing about it? And he said "that is not our priority now, but we know that". For me this is a very, I don't know what kind of adjective I want to use, apart from being irresponsible, because it's perhaps not the best adjective, because I'm pretty sure it was not their intention. When they did the project. But it is something to keep in mind. And it should be priority because, you are solving a problem that are creating others. So it's something that you need to keep in mind because all this infrastructure, gentrification by infrastructure doesn't happen only here. It happens in China it happens in Mexico, it happens everywhere in the world.

Rune: In Denmark..

Edwar: Exactly. So this something that I have notes with all this infrastructure, it has some positive sides, and it has some not that positive sides. These negative connotations that I have mentions they could have been solved, If by the time you design, when you plan the project, you have kind of like a, I don't know this word in English, like a blindar, it's like a bullet-proof, you know like a, how are you going to protect that population from these processes. Because you can tell the people that okay: We are going to have a metro cable station, you are going to benefit of that, and all of this flow of tourism, you can just... You this is going to stimulate the economy, but how is this not going to represent displacement?

Rune: How is it spread equally?

Edwar: Exactly. Something like that. How can you spread it equally. And I don't have the answer to that. I'm just telling you. Maybe you, when you are thinking about this problem, you can start thinking about possible solutions you know. How can it be spread. To not only the people who have the house in front of the station get benefit, but the not the rest of the population. I don't know. I don't know the answer to that.

23.16

Rune: It's very difficult.

Edwar: Yea, I mean. It's a question of.. I'm pretty sure the solution is (interdisciplina?) you have to, many think about this. You have economist, architects, sociologies etc..etc... But yea.

Rune: Yea, when i think about that, it makes me think about, also the, how the social stratification system works here. Eeh, like when we are talking about spreading the resources equally. Eehm.

Edwar: I have a colleague here working on that.

Rune: Ah okey.

Edwar: yea its a post-doc as well. And he is working on how to erradicate that system and something else. And he is here, in the bac, he is part of the project that i am working on. He has been working on that.

Rune: Could i do an interview with him? Or he doesnt have time? Another time? Or later today? If he has time

..... Having a conversation irrelevant to the topic of gentrification...

24.18.

27.09

Rune; it (stratification system b law in Colombia) also relates to gentrification in some way, you keep people in geographical areas, you gime them a motive to stay in their area.

Edwar: Yea yea, of course. Because you know that the stratification is subsidize system, right? So there are people are subsidized even though they are not low income people. Yeah yeah, he told me. He is a very interesting guy, i mean you can talk to him.. So he can tell you about how many people (+) groups, that are not low income even though they are subsidized. Even though they shouldnt. Because the system is not permites that. And this is, even in some sometimes a case of corruption, you know what i mean? So, it is interesting to see with him....

Irrelevant:

34.00

Edwar: Imagine if you are a low income family right.... You are a parent. And low income families usually have a lot of kids, right. Three or four kids, right. These kids are in school, studying. And you are making minimun wage. You know the wage in Colombia, i dont dont know, if you know?

Rune: 860.000 pesos

Edwar: 860.000, how many dollars is that? Or Euros? So to feed this family, to payy school, to pay the rent... huh..

Rune: But also a lot of people there, they work informal, so its not even the minimun salary, right.

Edwar: And one day to another you have the wage increased two or three times, you can not afford that to live.

Rune: Thats what i was thinking: of course...

Done:

Expert interview No: 9

Date: 9/01/2020

Name: Horacio

Working Title: Construction worker in informal areas

Location: Social organization "La Cancha de Parilla" at Juan XXIII

Theme: Rules, experiences of construction in informal areas around the metroable Line J.

A: ok, so first we wanna know if you have built any other houses in this area.

Horacio": Oh no, in other neighborhoods here is my first time working here, but in other places yes, many.

A: Ok, so to build here they don't need like licenses or something like that... H: ok, so that must be informed by the person in charge, Jenny, because I don't know about the papers and documents.

A: Ok, so they tell you just directions on how to make it and you do it.

H: Yes, so they tell us about the height, the floor, the quantity of floors, etc. So then you start preparing the base and the columns for one or 2 or 3 floors, regarding to what is needed. (He started talking very technically about the structure and the floor and the materials) basically said that it is ready to put the second floor.

A: ok, but you live in this area?

H: No, I live in San Javier.

A: Ok, so you use the cable car to get here?

H: Not really I walk. It is close from the station.

A: ok and how long have you lived there for?

H: I've been 44 years living there.

A: Ok, so you saw and experienced all the change from when it was really violent to now?

H: Yes I had to live the Orion Operation. I Had to lived all the violence in "la comuna 13" in the neighborhood.

A: Could you give us a small description of what happened in those days?

H: So it was a big conflict because it was a very violent people and then another group came to see that and they went displacing the other slowly but it was horrible.

A: So have you seen any change on the way people feel about the government? Like before people was afraid or it was good and how is now.

H: No, no, so now is very safe. There is not that many problems, look now at the escalators you see many tourists and many people from the usa that pass from groups of 20 or 30 people so no, now is very safe.

A: But asking for the government itself like before people trusted the government or in things they were gonna do or not?

H: No, the thing is that the government is like a lottery, because if you trust them more, it is when bad things start to happen, so you can't rely on them. You have to limit to what they wanna do. Because you wanna do some things, but they don't, so you have to limit to what they program.

Expert interview No: 10

Date

Name: Charles Ciro

Working Title: Civil Engineer at organization Build Change

Location: Mail Correspondence

Theme: Informal settlements, law, gentrification, influences of Line J.

"In houses of comuna 13 and 7, (like the other comunas of Medellín), there have been informal invasions since the last century. Many of these families arrived in Medellín displaced by the armed conflict and went from having temporary wooden houses to having poorly constructed houses in non-reinforced masonry. Over the years, each generation is building one more floor to live, multiplying the vulnerability of homes to earthquakes.

In this way entire neighborhoods have been consolidated.

Regarding the construction of the Metro system, it is clear that it improved the accessibility to transport and generated the commercial recovery of the homes near the stations, notably improved the road infrastructure of some neighborhoods (such as the Vallejuelos and Santa Margarita neighborhoods) and It was one of the factors that influenced the accelerated construction of new homes (especially in the area of Robledo - La Aurora).

We have worked quite specifically in the Santa Margarita neighborhood, which has direct connection to Vallejuelos station. This neighborhood was topographically isolated from the Metro until the car cable was built.

More than 90% of the homes in these neighborhoods have a high risk of collapse due to earthquakes.

The correct construction in these materials (clay and concrete blocks), the houses must be built under the structural system called "confined masonry" but the typical construction is housing of simple masonry, without confinement.

In the social aspect, the metrocable lines facilitated the transport to people with disabilities, who previously had to be carried by their family to access the buses that only went to the city center. Trade around the seasons also improved markedly.

In the legal aspect, although the houses are of informal origin, the people are legal owners of their properties. The government has carried out in the last years processes of complete legalization of many of these houses".

"I think gentrification for line J is not very excessive, it's true that rent price has gone up significantly, though it have not cause relevant displacements. I think that's because neighborhoods are historically "of low resources", then people with greatest purchasing power don't buy houses there. The exception for this is the area near to Aurora station, where a lot of houses projects were build (these are not informal).

Settlements was in the area before the Metrocable project."

Expert interview No: 11

Date 9/1 2020

Name: Milton

Working Title: Security-guard, and traveller with Line J

Location: Vallejuelos Station

Theme: Security, CPC, experince of travelling wiht the metro

Translated by translator

A: Do you live here ?

M: Yes, I live here in Robledo las Margaritas. So now it is peak hour but it is still not the worst time. There are some days that you wait in line for about 40 to 60 mins in San Javier to take the cable car up.

A: And at this time is more time

M: It is slow and the service goes slower because of the amount of people using it.

A: But it is still the best way to... .. like is worth it to wait 1 hour to get in...

M: Yes, because for example on Christmas we saw more problems because the 25th they closed the metro at 8:40 pm when most of the people were still working until 10 pm, so after work they had to take a bus to go to the center and the buses don't work at that time neither so it was a big problem. Right now, you will see everything's going back to normal, bad or good, but it is working. In sundays they open at 9am but taking a bus from here to the center is easier, but in the way back at 10 pm or after work is more complicated.

A: Ok, let's talk about security. You that have lived here and maybe you have experinced the violent time here, I'm not sure if it was here directly, but for example with your neighbors in Comuna 13, up here with the paramilitary groups, do you think the cable car has helped pacify this area? That it has become safer?

M: At some point yes, because if the metro wouldn't exist, a lot of people would be hanging around the streets so we could be more exposed to the thieves or the bad guys could steal our things easie. However, you can see a lot of criminal activity in the buses or at the cars, and you have to be like friends with them and talk and play the game to avoid problems.

So yes with the cable car we avoid a lot of uncomfortable situations. Or for example with women, we prevent with the cameras and even the cameras inside the cabins that morbids and the depraved suddenly surpass the girls. So it helps at some point to have the metro.

A: Ok and do you think the cameras are connected for example with the military base that is up the hill?

M: Yes there is connected. It has like a a command center where each camera is sended there is like the traffic one there is always someone monitoring the cameras at the same point. So metro cameras work the same, there is someone in charge of the cameras and is always communicating what is happening in every point.

A: Everything is connected then .

M: Yes, and that's why they have walky talkies so they can communicate with other stations.

A: Ok and to resume, how is the average experience with the metro.

M: It is great, and I wish they could expand it to make more lines and create for example the train in la 80 and start using the railway line again so we would have more possibilities to show Antioquia to the foreigners.

Show that there is more than criminals because we also have amazing landscapes and safe areas. For example in a small town you can fall asleep on the street and

you will wake up next day with everything in your pockets, different than the bigger cities. So yes we had paramilitaries but some people from the towns are still good people and if you need something they will help you and so on.

Expert interview No: 12

Date 9/1 2020

Name: Juan Miguel Guisao

Working Title: Unknown

Location: Vallejuelos Station

Theme: Security, CPC, experince of travelling wiht the metro

Translated by translator Angy

A: How long have you been working here as a security in the metro?

J: 2 months.

A: What's is your job focusing on?

J: It is focused on bringing safety to the people. Make sure they don't bring dangerous objects such as weapons. Be sure that kids who are tall enough pay the rate, and that people don't bring animals or if they do that they follow the regulatory instructions.

A: Do you always work in this station?

J: Yes.

A: Do you live here or in other part of the city?

J: I live in Bello

A; Do you have your own transport or do you use the metro?

J: I use the metro

A: Ok and how is the experience when you change from being an user and start being the security?

J: Well is a good experience. When you are working and doing what you like to do and specially in this public transport that a lot of people love, that's nice.

A: Ok, about security in this area, is this complicated or safe or dangerous?

J: Well in this area it is really quiet and easy, especially at the cable areas. But when you change to the line stations it is more complicated because there are more people.

A: Ok and for example here what are the typical problems?

J: Here? Well the kids that are always braking things. Here is the only thing that happens normally. Otherwise the people is really respectful and take care of the system so we rarely have bad situations with the users. It is more about kids we have to be careful that they don't brake something.

A: And what about technical problems or environmental problems like storms and those things?

J: Well those are more natural problems.

A: Ok but for example when the storms generates problems with the cables or things like that?

J: Well the cable have lightning rod so when they know the weather is gonna be like electric or rainy the metro administration take some security actions. Otherwise the system works well is one of the safest that exist. They do a lot of maintenance every day, and at night time when the system close.

A: What are the maintenance hours?

J: From 12 am till 3 am when they open the system.

A: And about security, does the metro have cameras inside the stations and outside?

J: Yes, each station has it's own camera, and they are connected with the police so In case of any emergency they know and react.

A: Ok and for example the camera outside, it focus more on this stations or how does it work ?

J: Ok the camera is a dome so it actually covers a big area and if you're closer to it they can listen to what people is saying and it covers a huge distance.

Interviews were made with travellers/citizens at these locations:

- 1. San Javier Station**
- 2. Juan XXIII Station**
- 3. ValleJuelos Station**
- 4. La Aurora Station**
- 5. Inside the Metrocables**

1. San Javier

Interview No: 1 with citizen living at San Javier

Date: 4th of January 2020

Name: Dubian

Occupation: Taxidriver

Relation to the Line J: Living in San Javier for 28 years

Location: At the military base at the viewpoint between XXIII and Vallejuelos in San Javier

Theme: About the impact of Line J on the area.

What is your relation to this area?

"I have been a taxi driver here for many years and i have lived in San Javier for 28 years"

How have you experienced the impact of the Line J?

"There have been major changes since metrocables came into being. It was dangerous before. Now there is life in the area. And it safe to live here. Now i never experience any problems."

What about house prices? Have they increased?

"Yes, after the cable came they have risen a lot. It is more attractive to live here now. And people are happy to live here now."

What is the price of a house?

"I have a three-story house. It costs 280,000,000 pesos."

What about the military? Do you experience their presence?

"There are police present. But there are no problems".

How about Operacion Orion? Do you remember that?

"Yes, but that happened many years ago. The area is better now. It's not the same at all today."

Interview No: 2 with citizen living at San Javier

Date: 6th of January 2020

Name: Erdnan

Occupation: Taxidriver

Relation to the Line J: Living in San Javier for 32 years

Location: At San Javier Cable Car and metro station

Theme: About the impact of Line J on the area.

Do you live in this area? (San Javier)

"Yes, my house is not that far from San Javier Station".

Have you lived here for many years?

"Yes, 32 years".

So how have you experienced the changes that has happened in the area?

"Uff, it is a another world here today. Before, there were so much violence. So much violence. It is not like that anymore. And poverty. And it was very difficult to find work".

What about now? How is it to find work today?

"It is better now. There are a lot of tourists. From the whole world. There are tourists from Europe and United States. There are almost always something to do here now".

What about Colombian tourists?

"Yes of course. There are Colombian tourists as well. You can see how many that are here. And then come from all parts of Colombia. Also Bogota".

What about the houseprices? Have they gone up? Or how did you experience that?

"Yes, they ave gone up. But, if tey are expensive? It depends which apartments we are talking about. When thye are closer to the station they are more expensive".

Do you live close to San Javier Station?

"Yes i do. Sometimes its horrible. Because there are a lot of noise from all the peoplel here. It is full of people. There are a lot of people all the time. And sometomes i need silence".

Do you remember Operacion Orion?

"Yes i can. Thinking of that makes me sad. It was sad what happend."

But are there a lot of police and security now?

"Yes everywhere. And camaras everywhere. They have put up a lot of camaras. A lot".

How many have they put up?

"I dont know. But there are a lot of security now".

Do you think that security came at the sam time as the cable cars?

"Yes, that is part of what have happened the last years here in the San Javier".

But do you think that thing are better now?

"Yes, it better today".

2. Juan XXIII Station Interviews

Interview No: 1 with citizen at Juan XXIII Station

Date: 8th of January 2020

Name: Tatiana

Age 17

Occupation: Unknown

Relation to the Line J: Living close to Juan XXIII station

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: How do you experience Line J and the impact of Line J on this area?

Translator: *"They say that it is cute, that it is nice, it is comfortable. That the windows are really cool. Because when you are bored you can jsut go up there and enjoy the view. It brings opportunities because its a transportation so it communicates you with other places and other regions. Its good, but they dont know exactly how that effects people. They are pretty young know anything about security in the area dn they dont believ that the cable cars or the metro has interferred, or has anything to do with the forming the change of the area. Its just a*

way of transport and thats nice, but its nothing direvtly connected to the security of the comuna."

Interview No: 2 with citizen at Juan XXIII Station

Date: 9th of January 2020

Name: John Montoya

Age: 71

Occupation:

Relation to the Line J: Living close to Juan XXIII station and travels with the metroable

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

"Rune: How many years have you lived here?

John: 5 years.

Rune: 5 years, okay.

John: But i come from California, Los Angelos.

Rune: So how do you experience the cable cars in this area?

John: The cable system is very good. And, good for travelling. Yea, because when there is bad weather, then they stop it. And then they started working so much. Too many people around here. People coming from Europe, Americans, but the whole world.

Rune: Yea, to see the area?

John. Yea, because thats why i say, when i talk to people like you that speaks english because that is the only way i can practice. All day i speak spanish.

Rune: Yea, thats true. So its nice to meet people from other cultures with other languages?

John: yea yea.

Rune: But have you experienced the impact of the cable car here in this are? How has the are developed in the last 5 years?

John. Ah yea, the cable car the last 5 years is very great, because...

Rune: But around in this area here? At the station has changed? Or?

John: They are coming from San Antonio, to San Javier and to La Aurora.

Rune: Yea. But around here at the station has the are changed?

John: Yes, it has changed, the naighbourhood has changed a lot. Because sometimes it was very bad, and you know a lot of gang people, but now its good. People come in changed the mind.

Rune: Do you think that it is connected to the metroables.

John: Yes, the metroables, yea.

Rune: So you live in this are?

John: yeah, i just came to this are for a little while.

Rune: But you have a walking problem?

John: yes i had a little operation. They make a cut here – (shows his knee)

Rune: How is it then travelling with the cable car? Is it comfortable for you or?

JohN: yes it is comfortable because all the people that a working around the cable are very nice. If i need help they come.

Rune Ah, so there is someone to help you with any problems?

John. With any problems. And in the metro too.

Rune: So the service is really good?

John. The service for the metro is very good. Very good. For Medellin, its great haha. People, i say to meet people, they should make a song. If you want to be a good singer, make a song "one day – no metro" haha. They gonna get famous.

Rune: Because the whole city would go down?

John: It would go down – terrible, terrible.

Rune: So do you think that the metro, or the cable car here is a symbol, is it a symbol of something good. Or what does it mean the cable car?

John. No, the cable car is good. Good for everybody! At the bigger station, San Javier, a lot of people at this time, at 7 or 7-30 or 8, because they are coming from work, and probably they wanna go home.

Rune: So do you think it is a symbol, do you know what i mean? Is it a symbol in this area for development of the area?

John: Yea yeah, the cable car is very well. Very well. For everybody its comfortable. They can go home early.

Rune: What about that the cable car goes above some of the houses. Do people not like that or?

John: No no no, its no problem. Because the cable never i know, (something), now they built a cable in another cable in another city. But the cable fell down. Only the cable. Because they were building. No for the (something)

Rune: yea, i have heard that. What about all the cameras? There are a lot of cameras here.

John. Yea there are a lot of cameras here.

Rune: Does it makes you feel safe or not safe?

5.19

John: it makes everything nice for the people. They are watching!

Rune: So its good or its bad?

John. No its good. Its good. Some people are doing something (cant understand).

John: because the cable cars have cameras, do you know that?

rune: Yea yea. But is that okay with you?

John: Yea its okay because they control. But i saw something that nobody knows. When i came in there, is a couple, making love in there. Making love and do you know how they made the camera not see anything? They opened an umbrella hahah. I cant believe it.

Rune: they were smart. "

Done:

Interview No: 3 with citizen at Juan XXIII Station

Date: 8th of January 2020

Name: Luis

Age: 38

Occupation: Unknown

Relation to the Line J: Living close to Juan XXIII station and travels with the metro cable

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII"*

Translator: *"He said its a (decisive) symbol, its a representative, it shows a lot about the city. That now everything is safer, before its was really like "caliente" so that means dangerous to walk around. And now it is really safe to walk around. So he says that its really fast to move and its really easy to use and that the service is really, that it works pretty good and that its the most important thing, becuse he says like, if it didnt work it would be a problem to use it. Its really safe as well. And comfortable to use. And the service inside that you get from the people that works there are really nice. For him it gives a really good balance for the system itself. And he says for example if you go to San Javier itself, the neighbourhood, you can walk, but if you are going to downtown or up the hill you for sure needs to take the cable car".*

Interview No: 4 with citizen at Juan XXIII Station

Date: 8th of January 2020

Name: Maritza

Age: 42

Occupation: Unknown

Relation to the Line J: Living close to Juan XXIII station and travels with the metro cable

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII "*

Translator: *"So she says its really, in onne word she says "it means everything". Like its really fast, and its really nice and its really comfortable. She does not use it everyday, But its good.*

Interview No: 5 with citizen at Juan XXIII Station

Date: 8th of January 2020

Name: Roberto

Age: 59

Occupation: Unknown

Relation to the Line J: Visiter of the area

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII?"*

Translator: *"What he say is that he does not live here. But he comes to visit (?). But he says that the cable car is really important if you wanna move in this area because that its fast, its cheap and you are safe on the street. He is really worried that the bikes on the street (Motorcycles) because he is really old".*

Rune: "Motorcycles?"

Translator: "yeah, so for example the motorcycle is running and he is walking, he is afraid that someone is gonna hit him. So for him the cable car is safety. Like he can be sure that nothing is gonna happen when he is inside the cable car".

Interview No: 6 with citizen at Juan XXIII Station

Date: 8th of January 2020

Name: Nelly and Roberto

Age: 61

Occupation: Unknown

Relation to the Line J: Visiter of the area

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: "How do you experience the Line J And the impact on the area around the station at Juan XXIII?"

Translator: *She says that she is not from here. That she come from Andes, which is another town. She came because she was sick from her eyes (there is a hospital near by). What she thinks about the cable car that it is really helpfull, its really fast, and its good for her. For example, she uses it when she needs to go to the doctor. She said its really easy to get when you live here around. You just go to San Javier and you connect from the metro with the cable car, and you just have to get down the stops and you are closer to your house. But she said that for example the cable car represents safety, and tranquilidad, or peace. Beacuse when the cable is not working you have to walk down and you dont know what is going to happen, in thew streets. Or you have to take the bus, and the busses are really bad driving, or something like that, so its safer to go by the cable car, and it means that you are going to be on time, and of course you are going to be safe wherever you are going. And also you are goingto be, arriving to your place, safe. They said that they like it a lot and that it represents a big transformation in the comuna. Because before it was really uncertain to, yeah to know how you were going to move in the city.*

Done:

Interview No: 7 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Mario

Age: 35

Occupation: Works in a restaurant at the station

Relation to the Line J: Works and lives at Juan XXIII

Location: At Juan XXIII

Theme: About the impact of Line J on the area.

Rune: "How do you experience the Line J And the impact on the area around the station at Juan XXIII?"

Translator: *"So he was Luis, and he works in a kitchen store, a chicken store. Pollo Frito. He is right in front of the cable car but he has never taken it because he has a motorcycle s he says that he does not need it. He works here and he lives closeby, so he says that he has never take it (the Line J). He is not from here. He is from Venezuela. He says, that it is okay to just dont take it, but he says that there are a lot of people here (because of the metro cable). But he says that he does not need to take it."*

Done:

Interview No: 8 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Marí

Age: 36

Occupation: Unknown

Relation to the Line J: Traveller with Line J every day

Location: At Juan XXIII

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII?"*

Translator: *"She said that it is really fast, that it is comfortable, that it is really nice that it has changed a lot, and not only on the obility perspective, but also the safety of the comuna. That for her its like everyday transport. She uses it every day to work. And that the only bad thing is all the big lines that makes in the morning because of course a lot of people takes it. But she says that it is understandable. And, she says that of course it is a symbol. Because when it does not work, you have find a different way to get down. For example you have to take a bus, or you have to walk down to the metrostation. And then from there move to the city. So she says that without the cable car its really hard to move in the city itself. Its really nice. And that it has changed a lot – it has improved a lot of lives."*

Done:

Interview No: 9 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Ovidio Alberto

Age: 34

Occupation: Unknown

Relation to the Line J: Traveller with Line J every day.

Location: At Juan XXIII

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII?"*

Translator: *"So he says that it (Line J) is really important. Everybody in the neighbourhood would say that before the cable cars all the houses werent worth anything. Now it is like the value of the houses has increased a lot. The houseprices*

and all the land property. The prices and everything has increased. And that before the cable car it was not nothing around. And now there are stores, people lives here. And that it is easier to get to work. For eaxmple, he lives in Itagui, so its really cheap to get from here by the cable car and he takes the metro to Itagui. So he says that it is really comfortable. He says that the metro sometimes gets a lot of people sometimes so its not that easy to move. But with the cable car is always fast. And alwasys comfortable to travel with. And that it is really cheap. So he basically really likes it. He says that italso brought a lot of safety to the neighbourhood. Its really easy to move and he feesl more safe.

Done

Interview No: 10 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Luis

Age: 51

Occupation: Shop owner

Relation to the Line J: Owns a shop near to the station of Juan XXIII and has lived in the are for 16 years.

Location: At Juan XXIII

Rune: "How do you experience the Line J And the impact on the area around the station at Juan XXIII?"

Translator: "He has lived here for 16 years. He saw the cable car. He lived here before the cable car even started. Right now it feels like it brings tons of opportunities for people who lives here. Its really fast to get to downtown. Its really easy to go everywhere. It also helped him to improve his house- for example, he used to live in a small branch, like a with wood and made of other materials. "

Rune: "Like "homemade house""

Translator: "Yea, and now they have been improving their houses. Before there were not that many houses. Because now, he hasnt worked outside (of the area) since the cable car started. He said hejust started working at his place. he works from here so he does not need to work for a company or or he does not need to work for someone else. "

Rune: "Becuse the opportunities are better here? "

Translator: "Yes, he has business opportunities here. And that the place has changed a lot and that it is really safe now and that he feels really happy living here. It is a symbol (line J), because for example the days they close it, for maintanance or, that is like 8 days or a week. A week in the year. They close it for maintanance. He says that at that time people just cry. They feel so bad because they have to take other busses or they have to take another way of transport. So its really something nescessarry here. People have become really friendly. Its really important. He really likes it. "

Rune: *"What about the noise?"*

Translator: *"He says that it is not noisy. For him its not noisy because they live underground. So for them they dont feel. Or they dont. But the cars and the motorcycles are more noisy than the cable cars. So you cabn barely hear it. So you here more the cars and the bikes."*

Interview No: 11 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Nelvis

Age: 25

Occupation: Local Barber, shop owner.

Relation to the Line J: Owns a shop near to the station of Juan XXIII

Location: At Juan XXIII

Rune: *"How do you experience the Line J And the impact on the area around the station at Juan XXIII?"*

Translator: *"The cable car does not represent a, its not symbolic, its not a ymbol for the people, its jsut normal. Biut it is really good that you can move fast. He uses it at least twice per week when he wants to go to San Javier. Its good for the people that it increases their opportunities because for example when people are really tired and they wanna go quick to their houses to rest they can take the cable car and then it is easier to ge their. He says: its nice and comfortable".*

Interview No: 12 with citizen at Juan XXIII Station

Date: 8/1 2020

Name: Emilio

Age: unknown

Occupation: Unknown

Relation to the Line J: Traveller, been living in the area fro 2 years.

Originally from Venezuela.

Location: At Juan XXIII

Rune: *"How does you experience the Line J And the impact on the area around the station at Juan XXIII?"*

Translator: *"The cable car is really good because it helpt you to move, to transport. He uses it for his job. To go to work. And that the are itself is really safe. He doesnt know that the cable car has a, like have been part of that transformation. But he feels that everything is pretty safe. Tha all the areas are pretty nice and that the people (here) are nice. He said that the cable car needs seatbelts for example for the kids or something like that. Because they are really abrupted all the time, like moving, so for safety reasons it could be better to have these things for the cable car. He doestn know if it is symbolic here, if it is something really important. But for him it is really noce and it helps him a lot. "*

Interview No: 13 with citizen at Juan XXIII Station
Date: 8/1 2020
Name: Oscar Morillo
Age: 68
Occupation: Unknown
Relation to the Line J: Living at Juan XXIII for 6 years
Location: At Juan XXIII

Rune: "How do you experience the Line J And the impact on the area around the station at Juan XXIII?"

*Oscar Murillo: he asked first for your name and we explained to him. *"I would like to know the country -Denmark- but how? - he looked at his legs, he was the one on the wheelchair" Angy: you never know where life will take you.
* Oh, yes that's true. Some day you will maybe find a champion like this who says that wants to help you. Those are things that happen in life and I just told him that I would like to know Denmark. But let's see what happen. Let's do it. You're recording this, right? Angy: yes. *Ok, let's do it. Angy: ok so you live here, in this area? * Yes, in that corner were you see the Virgin Marie statue, around there. Do you live here? Angy: no, I live in Boyaca las brisas. * oh ok I know. A: how long have you lived here for? *6 years. A: ok, and how do you feel about the cable car? * oh, the cable car is a wonder, we feel really happy with the cable car because it has a working time until 11 pm. 11:30 pm angy and is a cable car really well organized. If you're gonna travel with a wheelchair you report that you're going into the car and the name of your stop so they wait for you there and help you out or in the car. A: oh, ok so you say you're really proud of the cable car. So Do you think it is a symbol for the people in the neighborhood? *Yes, a symbol? Yes, it's like the metro. Is like for me in the wheelchair and the other people normal like Brune so it is very important because they go to work and come back from work and use the cable car to go home and it works from very early like 4:30 am so it's very good.

A: so in those 6 Years, have you maybe seen some changes like the area is safer? * what? Like in this 6 years... A: like in this 6 years have you seen changes in the neighborhood? *oh, see I like this interview that you're doing. I have seen in this 6 years that the law control is more present equal police and military because they have control in the neighborhood so you don't see violence.. all is in peace and it was even a great December, peaceful one without guns or bullet, just like fireworks but really controlled by the police, very controlled angy and that's the main change. So you feel wonderful, you feel safe. In my case, everybody knows me and everybody likes me and I see that because everyone want to help me and they say "Don Oscar let me take you" even kids wanna help. I like chess a lot so here I can find the spot and I can move. I go from my room because I rent a room and I come to this viewpoint and if I have to go the hospital then I take the cable car and I go in and they help me out at prado station. (Here the kid came in) * this boy I call him Tarzan. "Where is Jane your mom? * they started a side conversation. * sorry for the interruption. A: it's ok no worries. *so I call him

Tarzan. In this corner there is a arepa place, they are Venezuelans and they also like me so they hear I call him Tarzan and call him like that too. So like I tell you. Yes, it is wonderful and everybody moves on the cable car. I have now the possibility to travel on it and the police officer helps me to get out, the people around me help me as well or other foreigners as him. If you go to them and they understand you, like one time I played with an American guy or a Japanese guy played chess with me too one. So in my case, I am a person that is not complicated to talk with every type of people, Europeans and people from here you know there are some naughty ones or here in this neighborhood "la Divisa, metro cable Juan 23"

* is control all the bad guys, they don't mess with yourself and because they already know me they treat me with quality and respectfully

* and ok. A: well you have already answered almost all our questions hehe. So let's say in your condition with the wheelchair, how do you see the materials and design of the cable car? Is it easy for you to get in? Comfortable? * for me to get in? Yes, let's say the person who is gonna help me getting in to the car needs to have some experience, taking you in and out, regarding to the cable car. In the metro system itself, inside is the same some other user helps you. You asked them to help you and there isn't any complication. Everything is very good, like antioqueños say "una berraquera (like this is the shit). A: so you feel comfortable traveling in the cable car? Do you like it? * yes, I like I feel comfortable because there is a lot of safety on this. Let's say the cable car is a beautiful project, well constructed. Inside of the construction field of the cable car, I think there are foreigners involved with that, so it's a wonder very safe both cable car and metro for you to travel. A: ok don Oscar, that's great. Is there something you would like to add? Then he started talking about his hobbies that he relaxes playing chess and reading because "I have TV but it doesn't have the antenna so I rather play chess here than watching tv. A: so here is where you get together to play chess? * yes, in that store in front of us. Thing is Don Jorge is on holidays so is close. But for example if you come here at 5 pm you will see me here playing chess. Does Rune understand chess? R: I play sometimes but not good. * so for example you see this people like Rune and play chess with them. You let them win the first round and then win the others. And if the European is very good on it, you play good then and win haha. I've played with a Japanese guy and the gringo. They both spoke really good Spanish and they live here in the neighborhood. Because this neighborhood is getting filled by Europeans and people from Chocó, Venezuelans (there are many here), Costanians... and we're happy because there is a guy who lives in that White House. Andres Felipe my friend, he has some American friends and he invites them to come here, have lunch, drink something and to talk with us and that is really nice to share with the

3. Vallejuelos Station Interviews

Interview No: 1 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Alzizar Lopera

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

***Alzizar Lopera:** A: ok, alzizar we would like to know what do you think about the cable car? The idea that is here and that you use it. Az: is a good service and it gave life to the neighborhood. It was the best service that they put to us in this part and the services are excellent to move to other places because this transport paying once you can move to all medellin. A: ok, and do you live here and for how many years ?*

Az: 30 years..

A: and how do you see the difference between what it was before and what it is now ? Az: a lot better, more life, more mobility of people, more unity. A:ok, and let's say from the cable car itself, what do you think about the design? Is it comfortable? Az: excellent, a service very special for all the foreigner and all the people.

Interview No: 2 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Breiner

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Breiner

Breiner- A: ok, so you use the cable car? Bh: yes. A: ok, so what do you think about the service?. Bh: ok so I think is a good service and it helps a lot to the community here. Is a good service and it helps us a lot. A: ok, and so do you think it has make any change since they put the cable car here? Bh: so, it has been seen a little, not a lot but yes in the environment. now you see more movement, more people on the station. A: ok, and about the cable car itself, what do you think about the cabins, the design, what do you think? Bh: excellent is a really good service and you see the culture of metro.

A: ok let's say culturally and socially. Or don't you think is too crazy that you have the cabins passing the whole day above your head? Bh: no, the truth is you get use to it is more routine, is normal. A: oh ok, so you never thought it is gonna fall down ? Bh: for me, I've never thought about it. A: so let's say symbolically, do you think the cable car has created a symbol in this area. Bh: yes, in this area and all medellin Because I think the metro is the representation of medellin. A: what do you think about the peak hours? Bh: that's the bad think about taking the metro. A: and

which hours are the worst to use the cable car? Bh: from 5 am until 6;30 am and in the evenings from 4:30 pm until 7 pm. A: ok, Breiner. How old are you ? Bh: 21. A: what is the most traumatic to travel on the system? Price, pick hours ? Bh: pick hours, price not, because I think the price for the system is good. But the bad thing are the pick hours.

Interview No: 3 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Juan Esteban Murillo Arias

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Juan Esteban Murillo Arias

"Juan Esteban Murillo Arias- all these were from vallejuelos station he was very proud of his full name because he said if he didn't say it all was denying his mom or dad and he started telling us the story about the neighborhood VALLEJUELOS. JE: So Vallejuelos was a cementery, right ? So around that they decided to build a neighborhood because vulnerable people started coming. So all this was an invasion, even before the cable car was here it was an invasion. The population was conform by people from moravia, because it was a big fired in that place. When the population arrived here they started forming the community, also a lot of afro community came here from other places in colombia mostly from choco and uraba. The neighborhood- I was born in 1999 but I know the history slightly. The first thing that arise was the "accion comunal" that is down there, it has around 22 years, no sorry around 32 years so with that place they started calling more people from the closer neighborhoods like Olaya Herrera and from comuna 13 because this is the frontier from comuna 13. Then in 2000 there was a big fire that took almost all the neighborhood. This was a big tragedy in a local way. After that, all the communities started building their houses again and there came even more people. Around 2007 - 2008 there was another fire but this one wasn't that massive for the neighborhood but it was like y sectors so it moved away many people. Around this problem the government came and started taking care of it to build the neighborhood called "mirador de calasanz" and la Aurora which are surrounding us. And they started selecting the most vulnerable people who were in risk areas and they put it in different communities. Around 2011- 2012 la Aurora was created and more people was tooked out from their places. La aurora neighborhood was filled by people from olaya Herrera and calasanz. After that the neighborhood started getting down, even though the cable car was build here I think around 2011, it brought more people but it was more to use the cable car and go around but the neighborhood (vallejuelos) was left apart and whoever is listening to this can come and walk around and they will see that parks are made by the community and they are not in good shape, the infrastructure is not the best and there is even more invasion. The government gave us some economical resources because of the construction of the road to the sea project which is called "viaducto". So the houses which weren't in danger areas were rebuilt or fixed by the government but more people came to invade so there came a lot of people for

example from Venezuela. So from that moment there are not events from the government part for example from the local majority. I for example participate in many events and it hurts that is not in my community but others and that's what we have tried to do. I mean sometimes we try to make events with kids and play with them specially because of the history of the neighborhood because it's known that the neighborhood has shown some negativity because it used to be a cemetery. But even though, people keeps trespassing to de adversity and keep growing. And with kids at the moment we are doing recreational activities they are not planned, more spontaneous because we like to be interacting with the kids. And that's more or less the history of my neighborhood. I feel really happy to talk about it. A: that's so good. So, you feel that with the cable car it has changed the perspective and that it also has put you more desolated in some way? JE: I mean desolated because the houses were there and there was more people but the cable car itself attracts a lot of people just to pass through the neighborhood. Even before there were many activities planned by the management of the cable car and now they were left it apart. A: ok so they didn't before but now they stopped it. JE: yes, because let's say this is not a big neighborhood and it is not a tourist attraction. Is not like la Aurora, it is a periphery so people visit it a lot here because it is like a whole, not many people visits it, I mean people come to transit on the cable car to go to their destinations work or home. A: ok so now talking about the cable car itself. Have you use it at the pick hours? JE: yes, the pick hours start around 4:30 am. So in this station by itself because is not so transited like the principal stations you don't see it that much but for example at san javier station, san Antonio's or la aurora. I mean during mornings is a problem one way and then at night the problem is in the other direction. In the morning to go to work is a problem In all the stations from the comuna 7 and 13 metro is a problem to move at 7 am because the amount of people who goes to work is incredible. Around 7 and 7:20 am the amount of people is getting lower so they even low the speed of the cable car and then at pick hours that starts around 5 -5:30 until around 7:30 pm the amount of people is incredible to use the metro in the principal's stations because people is coming back from work so you see a lot of population. A; ok so for example when start the journey in this station, you can't be seat? JE: it depends of the hour. Around 6 am, during pick hours when you're going to work you don't find a space so you have to be standing or wait a lot until a cabin goes empty and in the way back if you don't make a line for 20 or 30 minutes you can't be sitting or if you make a shorter line you can go standing."

Interview No: 4 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Yeison

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Yeison- A: ok , please tell us a little bit about your experience with the service?

Y: ok so what I tell you ? With the cable car service is cool, because is a saving that you make because is cheap, economic and it transport you fast to wherever you wanna go so it's a good alternative to move a good option to transport.

A: ok and you don't get bother with the noise have you gotten used to it already ?

Y: yes we got use to it. Let's say we adapt to the rules. But no it doesn't bother you. Is cool that the cable car is here.

A: and have you noticed that something has changed since the cable car is here ?

Y: has changed? No, or yes maybe that is more clean. They put more ecological points to put the trash and you see everything more well organized. You see more order. It hasn't changed a lot but thanks God everything looks better now

A: ok, and do you think the cable car is a symbol for the community?

Y: a symbol? Yes, of course mami.

A: ok, perfect. And tell me during the pick hours, how is it?

Y: noo, during the pick hours

Is really boring because is a big line, you have to wait a lot and you even get angry with the people and you feel like leaving but because you have paid your ticket already you have to wait. That's horrible but that's life

Interview No: 5 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Esteban Guitierrez

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Esteban Gutierrez-

A: Esteban ok, tell us a little bit of your experience with the cable car.

E: with the cable car ? Is a good experience. Experience in which sense ? In general, like what I think ?

A: yes, tell us what comes to your mind ?

E: well it is a transport that helps a lot with the community. It facilitates the transport everywhere I mean facility to get to many parts of the city like center or exclusive parts like the stadium. From pole to pole that you can go between itagui and bello so in that way I think is a good inversion.

A: ok and let's say something negative that you see on the transport?

E: not, anything. I mean the noise is not till that late, it goes until around 11:30 pm so it doesn't bother a lot. Nothing negative. The transport is frequent and it doesn't stop a lot just when there is maintenance but nothing bad.

A: ok so when it stops which transport do you use ?

E: it gets complicated a little bit for everyone at least to those who doesn't have a car or a motorcycle because it gets harder to get a bus and there is people who have to go until Itagui so they have to spend 2 or 3 tickets so it actually gets really complicated when it stops.

A: ok and during the pick hours, how do you ...?

E: is something that you get use to it. It is something that becomes routine so everyday is the same and people get use to it. The first days are very complicate because if you're not use to it you get stressed and the heat, the uncomfortable but with the pass of the time you adapt to it.

Interview No: 6 with citizen at Vallejuelos Station

Date: 9/1 2020

Name:

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Pedro Antonio jaramillo

A: ok so what do you think about the cable car?

P: it is really good, it hasn't been stop or something like that.

A: and how many years have you had lived here?

P: since they were building this neighborhood.

A: ok so you saw all the construction.

P: yes, I live here with one daughter because my wife died so it was a girl left and here I am.

A: ok, and about the construction process. Did they come to talk with people before they started the project, or did they just put it ?

P: they came to talk and if there is any failure they come to check.

A: and during the pick hours how does it work with the transport.

P: yes, not, good you have to wait, you have to wait but I don't have to make the line.

A: does it bother, the noise

P: not really, is actually better because it use to be very quiet, you wouldn't even hear the birds.

A: ok and let's say because of the lights is more pleasant ?

P: yes, people is more happy, more helpful.

A: ok, and what do you think about the cabins? Are they comfortable or ?

P: yes, very well and clean. They have a lot of people cleaning and the bad thing is that people go inside and sit to eat but that's the only bad thing .

Interview No: 7 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Guillermo

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

Guillermo

A: ok, so first what is your perception about the cable car being next to you?

G: it is really good because it wasn't there before and it was very lonely and now you see many people, kids playing and people passing by and also is the transport that allows people to go out and travel through medellin with one ticket so it helps a lot to the community, so it is very important.

A: ok and when you're going to work, do you use it or you have your own way of transport ?

G: well, I have a motorcycle but when I don't wanna use it, it helps a lot because I live next to it so it's really close.

A: for example for the store, does it benefit you to be here ?

G: yes, because you see people passing all the time and for example when it is close you don't see people and is really quiet so you see the difference.

A: how is the safety here of the cable?is there like police or someone taking vigilance of the area ?

G: yes, well they have vigilance 24 hours and I've seen always police there or the patrols come by and go around. But the neighborhood itself is really Pacific. You don't see here any problem with robberies or something like that but is good to have them.

A: ok, and the system itself for example during the pick hours, how is it ?

G: well, it is very complicated because a lot of people use it so there are big lines but is just a matter of patience because it runs fast. The complicated is when there is a big storm and they stop it so people arrives to the metro connection and the cable car can't start so it accumulates a lot of people and that's the hard part but when is working normally, you see a big line but it evacuates fast.

A: what do you think about the materials itself?

G: all very good, a lot of safety. The stations are well organized and everything is well coordinated, is clean. There is always coordination when people is gonna aboard the cabins or when they make the lines or buy the tickets, the evacuation.

A: and when there are problems or it stops, how is it?

G: well people get scared but when you're use to it is normal. When someone just arrived they get scare and they say " so scary this stopped" or things like that but when you're use to it you feel normal.

A: does it happen a lot ? That it stops while you're inside ?

G: well, is normal when is raining or when there is a storm but normally is just when in some station people went inside the cabin out of the time and the door got locked or things like that but it keeps going immediately. During the pick hours it goes faster so when it stops you feel it stronger but taking that apart is ok.

A: what about the noise?

G: well, because I level right next to it, before it used to be really annoying because they had to check the noise and fix it so when it went down you could hear it and you felt how it vibrated like a zmmmmmm but every time they are making it better and fixing the problems so you can tell that you barely hear something now.

Interview No: 8 with citizen at Vallejuelos Station

Date: 9/1 2020

Name:

Rune Riisberg Funck
Mobilities and Urban Studies, Aalborg University

Age: ?
Occupation: Unknown
Relation to the Line J:
Location: Vallujuelos

Monica 20 a

A: for you what does the cable car means ?

M : a way of transport

A: do you use it frequently?

M: I rarely use it .

A: do you live here?

M: Yes.

A: how have you felt that it has changed since they built the cable car ?

M: so I've been here for 2 or 3 years only so I wouldn't be able to tell you any big difference.

But it has been better transport.

A: so you come a lot to hang out in this area ?

M: yes, we bring the kids here to play.

A: what do you think about the area ?

M: it is really safe and peaceful

A: ok, when you have used the system,do you think is nice or ?

M: very good and comfortable

A: so if you're heading to downtown do you take the cable car or use other way of transport?

M: only cable car because is faster and cheaper.

A:how do you see the pick hours?

M: is crazy and crowded. When we are at downtown we have to use it and be immerse on it.

A: and you have to make a big line to get in ?

B; well a lot but because we have the kids we can go by the side and they let us in but a lot of people have to make big lines or when we go alone like 1 hour wait.

Interview No: 9 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Jennifer

Age: ?

Occupation: Unknown

Relation to the Line J:

Location: Vallujuelos

A: do you use the transport frequently?

J: yes, I work so I use it everyday and my mom uses almost everyday.

A: so what is the general perception of the service?

J: well they have very good service is very economic, very fast. You get everywhere really fast because by bus it would take longer.

A: what do you do when it stops?

J: wait, haha normally when it stops it doesn't take longer till it starts over.
A: have it happened that it stops with you on the air ?
J: yes, well at the beginning it was hard but now we are used to it.
A: ok and during the pick hours, does the service change?
J: the service is the same but the lines are huge with a lot of people, so they make you do many curves... crazy.
A: about the cabins and the space itself what do you think?
J: everything is really good.
A: what about the feeling of floating?
J: well you get use to it. In the beginning it was like scary but then it becomes ordinary.
A: so you think the cable car has become a symbol for the people here?
J: yes, the metro system itself.

Interview No: 10 with citizen at Vallejuelos Station

Date: 9/1 2020

Name: Jennifer

Age: 23

Occupation: Owns a barbershop and making music

Relation to the Line J: Owns a barbershop next to Vallejuelos station and uses the line J sometimes

Location: Vallujuelos

A: "Sebastián López, (the singer) so we would like to ask about your experience with the cable car. Do you use it ?

S: yes, I use it since they started. I think it is a very good structure, I mean there haven't been any public scandals, like something went wrong with it or that there are fails that put life on risk. That's from what I've seen, because I don't use the cable car every day.

S: They should also improve, they should avoid stopping so much, because of the nervous people, because there are many nervous people and they must be aware of the closing of doors, they must put in a person, so that the cable does not dry. There are many people who suffer from the heart or who are scared of everything and it is not necessary that one day someone will be there for a fright.

A: Ok, but that happens a lot?

S: Yes, a lot has happened lately, but there are things of the system, such as, that one does not know what happens internally. One as a user, does not have to know that, but if one sees that there are many problems and that he stops a lot. What I say is that the metro system is very good, in general, and has expanded a lot for quality. For example, if the subway did not exist here, the transport would be buses and they would be very congested or people would arrive late to their destination as they would be delayed by other factors. Like the rest of the things that I see are very good, just like I have been with the barber shop for 1 year and the population in the neighbourhood has increased because the houses have been structured and

more people have arrived, but it would still be good if the metro knows, that the system is good, but they have to improve the system shutdowns, because many people are already afraid of riding, because they are very nervous.

A: At peak times, how does it work?

S: That is another problem. I do not blame the system, because they are not to blame for everyone leaving at the same time of their work. Similarly, the system should have integrated routes that reach these stations to decongest the system. People arrive tired and want to sleep or rest and they have to wait in the ranks, but if there were the integrated, people would have options to decongest the environment in the system.

A: In terms of security, has any change been noticed in the neighbourhood since the cable subway arrived?

s: We have always walked quietly, it was quiet and alone but the neighbourhood is calm, it is quiet. People who are in trouble are because they are looking for them. Now, after the cable there is more life, it is brighter, people come and spend a pleasant time outside the station. I put the barber shop here because they had already put the cable meter and it is a visible point, business has been good but in the stages that are. The system worked well, we have not heard problems, rumors or scandals."

4. La Aurora Station Interviews

Passenger interview No: 1

Date: 19/12/2019

Name: José

Occupation: Unknown

Relation to the Metro-cables: Daily passenger of Line J

Location: La Aurora

Themes: Experience of the cable car, CPC.

How does he experience the cable car and the transport connections?

"So i spoke with Jose. And what he told me was eeh, he does not take the bus, because he walks from the station to his place. But he really has a good impression of the cable car. Its really clean and it is really fast. And he likes it a lot."

Passenger Interview No: 2

Date: 22/12/2019

Names: Olav and Sari from the Netherlands (backpackers)

Occupation: Unknown

Relation to metro-cables: Tourist

Location: la Aurora Station

Themes: Tourism, Line J experience, CPC.

Rune: Why are you here in San Javier? Is it just because it is a tourist attraction or?

Olav: No, we are on our way for a paragliding in Medellin. So this is the starting point.

Rune: Ah, so it is just the easiest way to get here?

Olav: It is the easiest way to get to the top.

Rune: Ah okay cool. So have you tried the cable cars before?

Olav: Yea we tried it yesterday. It was perfect.

Sari: It was beautiful.

Rune: Ah okay. So you like that way of travelling? You didnt get scared with the cable car?

Olav: It is a comfortable way of travelling and you get a nice view and eeh.

Rune: So it is a good experience?

Olav: It is a good experience.

Rune: How do you think about the connections with the metro?

Olav: Yea, you dont have to check in or check out again to step into the cable cars so eeh, its made well.

Rune: Ah okay. And its cheap?

Olav: Its easy and cheap.

Rune: And you didnt have to wait in line?

Olav: No no, there was no line.

Rune: Do you see this as a tourist attraction too? Or?

Olav: No, i dont see it as a tourist attraction. Maybe at night, it can be a tourist attraction. No, its more like a travelling way.

Rune: What about the design? Did you think about that or?

Olav: No, i didnt think about it at all.

Passenger Interview No: 3

Date: 20/12/2019

Names: David + friends.

Occupation: Unknown:

Relation to Line J: Daily passengers of Line J:

Location: La Aurora Station

Themes: CPC, Cable Car Experience,

Rune: How do they experience the Line J in your own words?

Translator: *So they say that: The cable cars works perfectly. It is really fast, but the only bad thing is, that there are big lines that makes, for example at 5.30, 6 or 7 in the morning. Because there is a lot of people, for example in the rushing time. So they say that they (the metro-cables) move fast, but one of them have waited up to 20 minutes just to get inside, because of the amount of people that are waiting. And*

also, there are a lot of people that make the line, and then, if you are my friend then take you into my line, and then, like then people start getting "smart". And they say that taking a bus for example from here (la Aurora) to the centre is also possible but it takes so long. And, plus the traffic, they don't pass very frequently. So its even better to way for the cable car than to take a taxi for example to go to the downtown. And event when the cable stops or they close it for the rain, they prefer to wait until its good again, than take a bus, or like take another way of transportation to get down.

Rune: Ah so the cable car stops when it rains too much?

Translator: Yes when it is raining really really hard then it stops.

Passenger Interview No: 4

Date: 19/12/2019

Name: Maria Luz

Relation to Line J: Daily passenger of Line J

Occupation: Unknown:

Location: La Aurora Station: Waiting for the bus

Themes: CPC, experience of metro-cables,

Rune: How do they experience the Line J in the own words?

So, Maria Luz said that the Service with the busses is really bad. Sometime she has to wait for like one hour and a half, and in comparison with the cable cars its like, the cable car is never like, you never have to wait longer than 2 minutes. Its really fast. You can always go in. But when it comes to the bus its always a problem because you are either...when you are at home and you have to wait for the bus, its really long, and when you are at the station, and she is complaining a lot because it is a weekday. She said that, if it was a sunday, then she would understand why, because then there are less people travelling, so the busses may take a little bit longer. But because it is a weekday, she considers, that it is really long, that she have to wait one hour and a half, just to get the bus to the station and to her house. So its takes longer to wait for the bus than it takes to actually take the cable car and go downtown and do her things and come back.

She came to the shadow because the sun is really strong. And from here she can see when the bus arrives. So she wouldn't miss it.

Passenger Interview No: 5

Date: 19/12/2019

Name: Julio Cesar

Relation to Line J: Daily passenger of Line J

Occupation: Unknown:

Location: La Aurora Station: Waiting for the bus

Themes: CPC, experience of Line J.

How do you experience Line J in general? And how it is connected to other buses, metro, etc?

Translator:

So Julio Cesar, he said that the cable car is really good, and that you go really fast in, and that you are down close to the city center really fast. But when you takes to the bus it is really long just to wait for it. There are many different routes that parkes here, but his specific route has not arrived. He says it is really bad, he feel its really bad. And then he says. It doesnt work.

Passenger Interview No: 6

Date: 19/12/2019

Name: Katalina

Relation to Line J: Daily passenger of Line J

Occupation: Unknown:

Location: La Aurora Station: Waiting for the bus

Themes: CPC

How do you experience the transport connections to the metro?

Translator: *"She say that its very bad. Its terrible. They haven't to wait a long time just to get the bus. But she says that it is really bad and that she is been coming from Niquai. Yeah, she says she is coming from Niquia, so she has to stop in San Javier. Like in San Antonio then take San Javier then take the Cable car and then come here, so its really like, a long".*

Rune: You can actually see Niquia from here?

Translator: *"Yeah, but there is not like a direct bus that you can take to go up here. So its a long way and she says that she has been waiting for like one hour and a half. So now she is tired so her friends are going to pick her up because she does not wanna wait for the bus. She says the bus takes a little bit longer. Normally when you are in a place, like in some house, it takes sometimes 30 or 40 minutes for the bus to arrive. So you dont have an establisehd time to arrive so it takes even longer".*

Rune: *"So you never know?"*

Translator: *"Yea"*

Finished

Working in a shop: Interview No 7 at La Aurora

Date: 19/12/2019

Name: Maria Lena

Relation to Line J: Working in a informal shop

Occupation: Working in a shop at La Aurora Station

Location: La Aurora Station

Themes: How the cable cars influence business opportunities around the station

Rune: How have you experienced the development of this area in relation to the cable cars? And especially for your business?

Translator: *"So, she says she is doing a, like covering the girl who actually works here for many years. She has been here for like a week. But she lives in Belen. And then she says that it is really good to have the cable car here because its really easy to go back and on the way up. Its a little bit complicated because she has to take another bus to her house and it takes like one hour from Belen to here. But she says its really good.. There are a lot of commerce and a lot of people passing by. And also that its more like movement here than in Belen because Belen is more like home place like more".*

Rune: "Residential?"

Translator: *"Residential exactly. And so she says that here is more movement and you see more people al the time than there. And that in Belen you can not take out these, like cars just to sell things"*

Rune: "Like Informal?"

Translator: *Yea informal. You cant do it. And here its possible. And that she came here because she does not have many opportunities so someone offered her to cover so she decided to go.*

DONE:

Interview No 8 at La Aurora Station: informal shop

Date: 19/12/2019

Name: Rodrigo

Relation to Line J: Working in a shop

Occupation: Working in a shop at La Aurora Station

Location: La Aurora Station

Themes: How the cable cars influence business opportunities around the station

Rune: How do you experience the development of the area in relation to the Line J?

Translator: *" So Rodrigo says that he has been living here for three years. And he moved from another town, Puerto Boyaca, which is another town like maybe 4 or 5 hours from here. He moved here because his family is here and he wanted just to change. And he also said in these two years he haven't seen like many changes. But that he has been working in that place since he came here.*

Interview No 9 at La Aurora Station: Formal shop

Date: 19/12/2019

Name: Andres

Relation to Line J: Working in a formal shop

Occupation: Working in a shop at La Aurora Station

Location: La Aurora Station

Themes: How the cable cars influence business opportunities around the station

Rune. How do you experience the development of this area in relation to the Line J?

Translator: *"So Andres used to live in Nekoqlui. Its like in Uraba, so its more close to Choco and that area, but it is still being Antioquia. But he moved here like for more opportunities and to study. He study sports, like recreational things. But the studies in Buenos aires. So from here to there with the cable car and the metro and the tram it takes like one hour to get there.*

Done:

Interview No 10 at La Aurora Station: Formal shop

Date: 19/12/2019

Name: Edwin

Relation to Line J: Working in a formal shop

Occupation: Working in a shop at La Aurora Station

Location: La Aurora Station

Themes: How his relation is to the Line-J

Rune: How do you experience the Line J?

Translator: *It is good (Line J). Because its cheap and fast, and a good way to transport, but sometimes when its rushing time or when it is really busy a lot of people does not behave well. Like they, they go in front of you, its kind of difficult to get in. But beside that it is really good and it gives a lot of life to this place. Because after the cable cars closes, its like dead. Nobody come here because it is really hard to transport. And even for us well hard to get to downtown or leave the area when there are no metro. Or cable cars. And he says that a lot of tourist come here especially to this like look point, view point there. And that it is really nice to have the cable car close by. And that he has been here for 9 months. Living here, and working here for 4 months. But he has not seen any real, or big change. Because its really recent but he says that the cable car for sure has changed a lot in this area.*

Done:

Interview No 11 at La Aurora Station

Date: 19/12/2019

Name: Miguel 60 years old

Relation to Line J: Citizen Living at La Aurora Station

Location: La Aurora Station

Themes: How the area has developed after the Line J was implemented

Rune: So how do you experience Line J and the impact of La Aurora?

Translator: *"has lived here for 9 years and before that, there used to be just a road here, made of mud and everything was really bad, and there were nothing here just farms and big lands. But after the cable car started, they (we) have more access to the center and the downtown, and to do other things. Here its really safe. They (we) believe that the cable car is the beauty or the wonder of the city.. It help us a lot to to connect us with other places. Now it is pretty safe and we like to live here. Everywhere its safe. And if you are good with other people it is safe. "*

Interview No 12 at La Aurora Station

Date: 19/12/2019

Name: Isabella

Relation to Line J: Working in the formal shops at La Aurora

Occupation: Unknown

Location: La Aurora Station

Themes: How the area has developed after the Line J was implemented

Rune: How has the area developed in you eyes after Line J Was Implemented?

Translator: *"Without the cable-car all the commerce in this area would not be possible. Because mostly people start coming here just to visit. Even locals didn't know this area but they are coming now to see what's happening and a lot of people come here to live or work... And the prices of the house has risen a lot so now its more expensive to live here. And the quality, like the social stratification has risen as well so now it is 3, before it was 1 or 2. Because of the (new) buildings and the cable cars. The cable car is the best to move and get around in the city. And for the business it is really well. Because that is what people come to see here. Just to visit. But now, in the morning, it is really quiet. Because its December and people goes to travel or goes to other places. But normally every time you will see people. But just when the cable car closes its more quiet. People closes their shops?"*

Rune: When it closes, what does that mean? In the night or?

Translator: *Yes, in the night. When there is over the transportation. Most of the places are like that.*

Rune: Super-

Interview No. 13 at La Aurora Station

Date: 19/12/2019

Name: Ana

Relation to Line J: Working in the formal shops at La Aurora

Occupation: Work in the formal shops at La Aurora

Location: La Aurora Station

Themes: How the area has developed after the Line J was implemented

Rune: How the area has developed after the Line J was implemented

Translator: *"She lives here but uses the cable car to go down to do other things. To buy stuff. Its good for the sales. Because they have a lot of people coming here. But not a lot of tourists. Its more safe and there is more poeple coming here, and there are also more buildings to be build, so a lot of people are going to come."*

5. Inside the Metrocables

Passenger interview No: 1

Date: 20th of December 2019

Name: Maria José

Occupation: Working at Tostao

Relation to the Line J: Daily passenger of Metrocable Line J

Location: Inside the Cable Car

Theme: About Materialities

About the experince of the floor: The floor of the metrocable feels a bit unstable, it is obviously unstable, because it floats through the air.

About the experience of the windows: I think it is a sensitive glass, for sure I do not know how resistant it is but it does not seem of a strong enough material, maybe I am wrong

About the experince of the view: The view, it is beautiful both morning and afternoon and night are appreciated, it is really nice

About the experince of Gravity: Sometimes im scared. I have been dizzy a couple of times, but when you get more experienced you lose the fear.

About Colors: It has a good volume both outside and inside

About the seats: The seats are not 100% comfortable.

About the speed: It is very fast to go by metrocable, really, it saves a lot of time

About the space inside the metrocable: The space is small, they are small the cabins, but I think it has the necessary space that is needed

About distances: I don't know how far it is from the ground, but it can be scary to look down.

Passenger interview No: 2
Date: 18th of December 2019
Name: Diana
Age: 24
Occupation: Student
Relation to Line J: Daily passenger of Line J
Location: Inside the Cable Car
Theme: About Materialities, travel routines, CPCs.

Floor: *"Good, normal"*

Windows: *"Cool"*

The view: *"The view is nice, you can see places from the air that you did not know existed"*

The colours: *The colours are also nice, they are in the perfect spot, so as not to bother, not to get bored"*

Security: *"Security is good, something unusual has never happened to me.*

The seats: *"The seats are comfortable for such short trips".*

The cabin: *"The cabins are also comfortable, they fit a certain number of people without being tight. I feel secure, and satisfaction for being able to reach many places quickly. I feel happiness because my city is moving forward, etc."*

Gravity/travelling with Line J: *"I don't know. For my daily routines it is of little importance".*

The connection between Line J and other transport routes:

"The connection between the metro-cable and other transport routes from my point of view is excellent. The entire metro system and its integrated buses are very good and reach many places in the city".

Passenger Interview No: 3
Date: 22th of December 2019
Name: Juan Carlos
Age: 27
Occupation. Unknown
Relation to Line J: travelling with Line J
Location: Inside the Cable Car
Theme: About Materialities, travel routines, CPCs.

Can you explain me how you experience these different materialities inside the cable car?

The floor: *"I think the floor is nice. It looks like its practical. Easy to clean hehe. Eehm, "*

The windows: *"Sometimes i think it is annoying that you cant see much though the windows. That it is not clearer, the glass .. that it is not clean enough to look through it clearly. And that also means, that your view is not as good as it could be. Because it is a beautiful view, so i think that it is a pity. Eehm"*

Gravity: *"Sometimes you can feel a small pressure in the ears. But it is not that i think. Because the speed is not that fast. And you do not go up in the air that fast."*

Colors: *"The colours that are used, are maybe not the most beautiful ones. But it works haha. "*

Safety: *"They make you feel safe. Very safe. You never get the feeling that it is unsecure. Never. Eeh..."*

Comfort: *"The seats are ok. Maybe these ones are not so soft. It is just aluminium or something like that. But I think some of the seats are covered with fabric which is more nice. But it is okay. It works. And the trip is not that long. So it is ok. I think the comfort is good. It is not luxury, but it works. Its practical. It gets you where you want to go. And it feels nice to move in this way. You feel like you are going somewhere. Even though it might not go that fast you still feel like you are moving relatively fast in a very comfortable way. There are not a lot of noise and not a lot of people. In that way it is very comfortable. "*

Space inside the metro-cable: *"It can get pretty hot in here sometimes. Now it is around 5p, so its not that warm right, but sometimes when the sun is really strong it can get pretty hot in here and that can be pretty uncomfortable. Eeh, and there are some air through the ventilation system in the windows, but it is not always enough. I think they could improve that. That would make the trip better. The days where the sun is shining a lot. "*

Distances: *" I think it is interesting question. Because you get used to it, because we are, maybe 50 meter up in the sky the view is really good. And it is not often that you can travel this way. It is nice that you have the perspective of the city. And the windows makes you feel like you are out in the open. That you do not feel trapped. "*

Connection between metrocable and metro-system?

"I think it works really really well. It works really good because it is so unique that it works so good. It is like a modern city. But of course sometimes in the peak hours it seems like there are not enough space in the metro. Not enough space to move all the people that goes to work. The people that go to work and go home again. "

Passenger Interview No: 4

Date: 19th of December 2019

Name: Maria

Occupation: Student

Relation to the metro-cables: Passenger of Line J

Location: Inside the metro cable:

Themes: Materialities, CPC, experience of travelling with Line J, importance of the travel route,

Rune: *"What does she say about the metro cables?"*

Translator: *"She feels like the sun is pretty strong inside the metro-cable And that the transport is pretty nice.*

She only uses it (the metro-cable) when she is going to the clinic, to the hospital there. But she lives actually in Robledo, so she lives pretty close (to the clinic). But there are not roads to go there. Thy kind of closes from one side to another. So even though she lives really close by, she has to go all around the way to take the metro-

cable."

Rune: Ah, okay so this is the fastest way?

It is the only way. Yeah, but she says that the fast way, but she lives closer, so then she would have to take the metro all the way around to get here. So its actually kind of long.

Passenger Interview No: 5

Date: 22 of December 2019

Names: Salomon Gil Espinosa and Juan MA Espinosa Quintero

Occupation: Students

Location: La Aurora Station

Themes: Materialities, Importance of Line J for Daily Travel Routines (motility), CPC.

Rune: *"How do you the materials inside of the cable car? How is the floor for example?"*

Salomon: *"Well very comfortable"*

Rune: *"What about the windows?"*

Salomon: *"They are safe and with a good view"*

Rune: *"What about the view from the inside of the metro-cables?"*

Salomon: *"Very good view. You can see almost the entire city, the stadium, and a lot of the neighbourhoods."*

Rune: *"What about gravity when you travel. How does it feel?"*

Salomon: *"It feels normal I haven't experienced any uncomfortable movements."*

Rune: *"What about the colours?"*

Salomon: *"The colours are nice, and tasteful."*

Rune: *"And how do you feel the safety inside?"*

Salomon: *"The safety that is offered by the people working at the metro is good"*

Rune: *"What about the comfort in general?"*

Salomon: *"The seats has good comfort when travelling"*

Rune: *"What about how comfortable it is to travel in general?"*

Salomon: *"Its good. Comfortable sometimes. But there are many people travelling at 9am when people have to go to work."*

Rune: *"How does it feel to move with the cable car?"*

Salomon: *"It feels stable. There are no sudden movements. Sometimes it stops. And it feels a bit like a vacuum"*

Rune: *"How do you experience the space inside the metro-cable?"*

Salomon: *"The space is nice. Its very neat".*

Rune: *"How do you experience the distance to the ground?"*

Salomon: *"It varies a lot. Sometimes its high and sometimes its low."*

Rune: *"How important is the Line J for your daily routines?"*

Salomon: *"Very important since it is easier to mobilize and go to places quickly and easily."*

Rune: *"How do you experience the connection between the metro-cables and the other means of transport?"*

Salomon: *"The service is good. Everything is managed with the civic card that you can recharge to pay for other trips."*

Rune: *"Do you have other experiences of travelling with the metro-cable? Good or bad?"*

Salomon: *"I think the prices are good. It is perfect for a normal budget. The schedules are good, good for work. And we get a lot of help from 'the metro friends' (the metro workers)"*

Added by: Juan Ma Espinosa Quintero:

"The prices for each trip is between 2.500 and 2000 pesos. It is an easy way to arrive quickly to important destinations. The public internet that the metro provides is very viable, that they facilitate an internet connection for the people."

Passenger Interview No: 6

Date: 8/1 2020

Names: Julian, 4 years old.

Occupation: Unknown

Relation to the metro-cables: He was travelling with the cable car with his dad.

Location: San Javier

Themes: Materialities, experience in general

Translator: How do you experience the cable car?

Julian: *"The cable car is really nice, but he is afraid when the cable car is moving in the air. And the chairs were good, but are not too comfortable. They were way too hard, and then, the chairs had holes, and he doesn't understand why, like what is that for? But he was happy to be there, it was his first time and, he came with father to see the area, to see the view. And he said that he likes it."* (Own translation)

Done:

Passenger Interview No: 7

Date: 11/1 2020

Names: Isabella 22 years old.

Occupation: Studying/working

Relation to the Metro-cables: Frequent user of the Line J

Location: The questions were sent in an email

Themes: Materialities, experience in general

Rune: How do you see the materials inside of the cable car?

Isabella: *"The metro-cable is comfortable, safe, suitable for people to enter. Yes, I feel like the cable car is a comfortable space to be in, while getting transported to my home or to my workplace."* (Own translation)

Rune: How do you experience the windows?

Isabella: *"The windows are large and allow you to have a visibility of the city, but when there is a lot of sun, a lot of light comes in because it is high up and that can be a bit uncomfortable."* (Own translation)

Rune: How do you experience the view?

Isabella: *"The view is pleasant, because you can see how the city is formed and also the change that is happening."* (Own translation)

Rune: How do you experience the gravity when travelling?

"Isabella: Gravity, it feels a bit of a vertical to be up in the cable car, that is how I feel, and sometimes I think about what would happen if this falls down. But I read that before they were building the metro-cable as a means of transport for Medellin, there were made a lot of studies about how to do constant maintenance. And when it is raining or heavy storms, it does not work. They stop it to avoid a catastrophe." (own translation)

Rune: What about the colours of the metro-cable?

Isabella: *"The colours are equal to the Medellin metro de Medellin logo, since it is part of the integrated transport system. They also correspond to those of the Antioquia flag, the green one and make one recognize them, but in the same way, they are different the In order to also publicize companies or events that are going to be held in Medellin, for example at a flower fair, they continue with the subway logo, but they add figures or photos corresponding to the celebration."*

