



# Understanding the Impact of Resource Utilization on Service Ecosystem Well-being

In the Context of Copenhagen Metro

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**Submission Date:**

May 14, 2021

**Number of Characters:** 272.923

**Number of Pages:** 105 (214)

# Acknowledgments

First and foremost, we would like to express our deepest gratitude to our supervisor, Richard Gyrđ-Jones. Your insights and feedback were highly valuable to our work. We are thankful for your guidance and input throughout the process.

Additionally, we extend our gratitude to our interviewees BK, EG, EJ, IL, JR, ND, NP, SN, & VG, who participated in our research and contributed with their opinions, stories, and experiences. Thank you!

Lastly, our gratitude goes out to our families and friends for their continuous support and words of encouragement. Your confidence in us throughout the many years has been invaluable.

# Abstract

**Purpose:** This paper aims to understand how the utilization of actors' resources in value processes impacts the well-being within a service ecosystem. This is done by putting forward an interdisciplinary theoretical framework with the purpose of enhancing the current understanding of well-being further.

**Design/methodology/approach:** An exploratory case study is carried out, and data is collected through nine semi-structured interviews. The research takes place in the specific context of Copenhagen Metro.

**Findings:** The study finds that a successful resource integration by actors leads to value co-creation, which positively impacts their own well-being, and consequently, the service ecosystem's well-being. Conversely, a failure to integrate resources leads to co-destruction, negatively affecting the individual and service ecosystem's well-being. Nonetheless, it is also found that the nature of the specific service ecosystem strongly impacts the value processes taking place within it.

**Research limitation/implication:** Per the particular focus of the study, the research is limited by the context in which it is carried out. Thus, it is suggested that the findings are explored in other service ecosystems of comparable size and nature.

**Practical implication:** From a managerial perspective, this study provides insights into the complex nature of value processes and the reasons behind them. By analyzing several value processes, light is shed on how value co-destruction can be prevented and value co-creation encouraged.

**Originality/value:** This paper puts forward an integrative framework of concepts not previously combined by research. This advances the well-being research and practitioner agendas.

**Keywords:** Customer Experience, Resource Utilization, Value Processes, Well-Being, Service Ecosystem

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# 1. Introduction

In recent years, services have become more prominent in global economies and market interactions (Ostrom et al., 2010; Vargo et al., 2020). Like other advanced economies worldwide, Denmark's GDP in 2019 was mainly composed of services that amounted to nearly 65% of its total gross domestic product (Ostrom et al., 2010; Statista, 2021). Interestingly, it became noticeable that even in the early 2000s, mainstream marketing literature had commonly regarded traditional services as inferior to tangible goods. Thus, that led to a limited amount of academic research and knowledge about the complex nature of services (Vargo & Lusch, 2016).

However, due to their prominence, services have penetrated and become intertwined with consumers' daily lives (Anderson & Ostrom, 2015). Nonetheless, the impact that services have on communities, societies, and markets remains a topic widely unconsidered and unexplored. Thus, Anderson and Ostrom (2015) argue that our knowledge and understanding of service must surpass the dominant focus on service quality as well as customer satisfaction and loyalty. Consequently, as services affect individuals, communities, and societies, academic research and businesses ought to turn the focus towards the issue of well-being. Nevertheless, Dagger (in Ostrom et al., 2010) argues that convincing business and practitioners to concentrate on increasing well-being as end-goal will be a cumbersome challenge. To counter this challenge, research needs to be conducted interdisciplinarily so that insights from various fields are integrated and, ultimately, lead to a practicable and impactful understanding of well-being (Anderson et al., 2013).

In their effort to stimulate knowledge creation, Ostrom et al. (2010) identified planning, building, and maintaining public infrastructure in metropolitan areas, i.e., public transportation, to be of key importance due to its prominent impact on citizen's well-being. As such, public transportation is an essential element in the daily life of many, and access to it has been argued to impact people's well-being (Jones et al., 2013). However, the way in which citizens make use of public transport differs, which means that the riders likely derive value from various aspects of it. At the same time, consumers are increasingly more actively involved in the designing of services and are, hence, at the center of co-creating value propositions (Anderson & Ostrom, 2015). Thus, to uncover the nature of well-being in the context of public transportation, one ought to understand the character of the interactions and processes between various stakeholders through their experiences. Ultimately, Dagger (in Ostrom et al., 2010, p. 9) states that it is "*critical to design, improve, and scale service systems in a way that simultaneously enhances cocreation, lifetime value, and well-being.*"

Thus, this paper seeks to answer the calls by Ostrom et al. (2010) and Anderson and Ostrom (2015) to bridge the gap between the academic research and practitioner understandings of well-being by conducting interdisciplinary research in the context of public transportation infrastructure.

## 1.1 Research Objectives & Research Question

In pursuit of bridging the aforementioned gap and advancing our understanding of well-being, this research proceeds with the following objectives:

- Bringing forward an interdisciplinary and integrative theoretical framework that allows for a comprehensive understanding of well-being.
- Advancing the well-being research agenda in service research by scrutinizing its presence in a service ecosystem.
- Exploring the role of resources utilized by various actors in value processes through first-hand experiential narratives.
- Uncovering the interplay of relationships between actors and its consequences on well-being within a service ecosystem.

Consequently, the research question addressed throughout this paper is:

***How does the utilization of actors' resources in value processes impact the well-being within a service ecosystem?***

## 1.2 Research Outline

To guide the reader through the paper and provide an overview, a summary of each chapter is presented and visually depicted, cf. *Figure 1*.

Chapter 1 introduces the reasons for why the topic at hand is of relevance and establishes the research question that guides the rest of the paper.

Chapter 2 identifies, discusses, and reflects on the current academic literature pertaining to the core areas of the paper. Theories and arguments that are of relevance to the research question are critically presented.

Chapter 3 outlines the methodological considerations of the paper and consequently establishes the boundaries within which the research operates. The logic behind the research approach is specified, and the research process is described in detail.



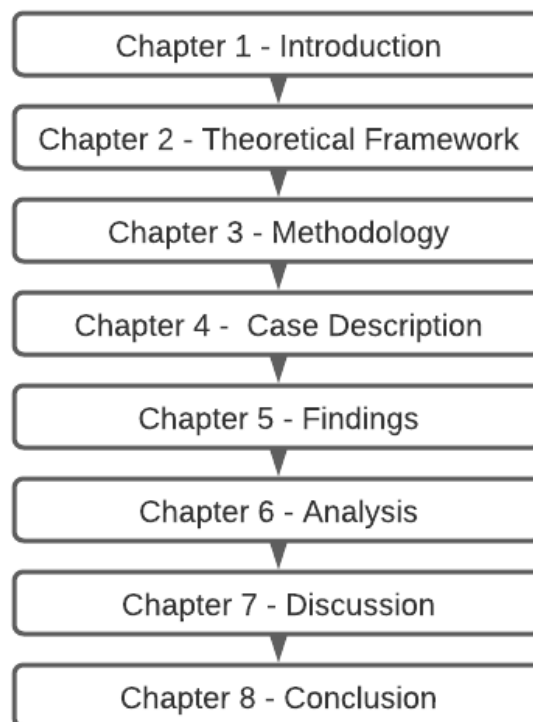
Chapter 4 provides a case description of the Copenhagen Metro. It defines the key information that is beneficial for the reader to have to understand the context in which the following findings have been made.

Chapter 5 presents the findings of the paper. The most important themes identified through the conducted interviews are outlined, and quotes reflecting insightful and relevant statements are presented.

Chapter 6 conducts the analysis of this paper. The previously introduced findings are reflected onto through the established theoretical framework, which provides answers to the research question.

Chapter 7 discusses the implications of the paper from a theoretical and managerial perspective. The limitations to which the paper is subjected are acknowledged and outlined, and consequently, suggestions for further research are presented.

Chapter 8 concludes the paper and summarizes the answer found to the research question.



*Figure 1 - Chapter Overview, own creation.*

## 2. Theoretical Framework

The following section lays the conceptual foundation of this paper by presenting theories and frameworks from the service area research. The concepts related to the research question are explored, and their combination is discussed.

### 2.1 Defining Service

The concept of service and the whole service industry have been on a steady rise since the 1950s as a consequence of automation, robotization of manufacturing, and ultimately the introduction of information technology (IT) (Gummesson, 1994). However, understanding what is rendered by a service remains a complicated and broadly discussed matter (Grönroos, 1998). Concurringly, Johns (1999) argues that despite the increasing prominence of service, it remains an elusive concept, mainly due to the rapid development in the service research and industry.

Despite the ongoing academic debate, it becomes apparent that service has undergone a conceptual development over the years, cf. *Table 1*. Using one of the earlier definitions of service as offered by Rathmell (1966), it can be argued that the goods and services were presented as dyadic opponents, between which a clear distinction was to be made. Acquiring a good is seen as gaining an asset, whereas a service is argued to only incur an expense. Thus, this definition showcases the prominence and domination of goods over services. However, it ought to be acknowledged that Rathmell's (1996) definition understands services as consisting of a performance and effort - whereby it is hinted at a processional nature of services. Additionally, Grönroos' (1988) definition, cf. *Table 1*, exemplifies the conceptual development of service by assigning four key characteristics. Arguably, this conceptualization still focuses on identifying the differences between goods and services. Nonetheless, this definition contributes to the service research discourse by identifying the customer as an active participant in the production process (Kelley et al., 1990). Contrastingly, Gummesson (1994) propagates the view that research must move away from placing goods and services on the opposite ends of an imaginary scale. It is claimed that value is not embedded in a good or service. Instead, customers are argued to buy an offering that ultimately creates individual value to the customer that the manufacturer does not predefine. Lastly, Zeithaml et al. (2018) maintain that services are processes in which individuals are proactively involved. In doing so, the individuals engage not only in co-production but also co-creation of a service offering.

Authors	Conceptualization of Service
Rathmell (1966, p. 33)	“A good is a thing and a <b>service is an act</b> . The former is an object, an article, a device, or a material . . . whereas the latter is a <b>deed, a performance, or an effort</b> . When a good is purchased, the buyer acquires an asset; <b>when a service is purchased, the buyer incurs an expense.</b> ”
Grönroos (1988, p. 10)	“Services are more or less <b>intangible</b> . Services are <b>activities</b> or a <b>series of activities</b> rather than things. Services are at least to some extent <b>produced and consumed simultaneously</b> . The customer <b>participates in the production process</b> at least to some extent.”
Gummesson (1994, p. 78)	“Customers do not buy goods or services in the traditional sense. They buy an offering which renders <b>services which create value for the customer</b> . The offering and the value consist of many components, <b>some of them being activities (services), some being things (goods)</b> . As a consequence, the <b>traditional division between goods and services is long outdated.</b> ”
Zeithaml et al. (2018, p. 4)	“Services are deeds, <b>processes</b> , and performances provided, <b>coproduced, or cocreated by one entity or person for and/or with another entity or person.</b> ”

Table 1 - Developments in the Conceptualization of Service Over Time.

### 2.1.1 The Nature of Service

As previously mentioned, researchers commonly mischaracterized services as the dichotomic counterpart of tangible goods and, hence, there was a profound focus on differentiating them from one another (Gummesson, 1994; Rathmell, 1966; Vargo & Lusch, 2004). The differentiation prompted a narrow definition of services as inferior to goods. Vargo and Lusch (2004) proposed this widely adopted business mindset to be named the Goods-dominant Logic (hereafter GDL). The reasoning under this logic states that tangible goods were the predominant unit of market exchange. The GDL subscribes to the neoclassical economic theory, in which consumers are utility-maximizing and rational actors (Vargo et al., 2020). Thus, according to the logic, manufactured goods had value and utility embedded in them for which consumers purchased (Vargo & Lusch, 2004). Hence, the producer creates value in a controlled manufacturing process, and the customer purchases it. Ultimately, it can be argued that the GDL sees *value as exchanged* in a linear dyad between the manufacturer and customer (Beckman, 1957).

However, the decades-long mischaracterization of services had generated voices among researchers advocating adopting an integrative and balanced relationship between goods and services and establishing a rigorous body of service research (Gummesson, 1994; Rust, 1998). The seminal work of Vargo and Lusch (2004) prompted the shift in understanding how market exchanges occur by postulating that *service* (not interchangeable with *services*) is the

fundamental unit of exchange, which, in turn, led to coining the metatheoretical *Service-dominant Logic* (hereafter SDL). Thus, with the paradigmatic shift from GDL to the SDL, Vargo and Lusch (2004) posit that a market exchange's goal is to co-create value through the exchange of service instead of a good. In the same virtue, Coombs and Miles (2000, p. 97) argue that tangible goods serve as carriers “*of the services they deliver or tools for the production of final services.*”

It is of paramount importance to distinguish between a service and services. In this paper, a service is defined as “*the process of using one's resources for the benefit of another actor (or oneself)*” (Vargo et al., 2020, p. 3). The SDL, with its definition of service, breaks away from the favored view of service that is embodied in four characteristics – intangibility, inseparability, heterogeneity, and perishability (Zeithaml et al., 1985). By utilizing the broader definition put forward by Vargo et al. (2020), the prominence and the pervasive nature of service are showcased. Using the definition above, which focuses on service as a process, it can be adopted as a common denominator for exchanges involving tangible goods and intangible services (Vargo et al., 2020). Thus, individuals use their skills, knowledge, and competencies in market exchanges and receive a service in return.

In addition to introducing their proposition of a paradigmatic shift of marketing thought, Vargo and Lusch (2004) postulated eight foundational premises, which are the fundamental assumptions of the SDL. However, with years, the rigor - surrounding the foundational premises and the logic - had increased, and five of the foundational premises were singled out and gained the status of an axiom, i.e., core assumption (Vargo & Lusch, 2016). The first axiom underlines the shift in marketing thought and establishes “*service is the fundamental basis of exchange*” (Vargo & Lush, 2016, p. 18). Thus, the SDL and the axiom lay the foundation for service, understood as the application of resources for the benefit of another, to be pertinent to all exchanges (Vargo & Lusch, 2004).

In concurrence with the SDL, it is argued that market exchanges can be defined as *service-for-service* because actors exchange resources to benefit each other (Vargo et al., 2020). The SDL, thus, establishes service as a perspective to underline the shifting nature of market exchanges. This perspective can be exemplified by analyzing a public transportation transaction where the customer (an actor) exchanges money (a resource) with the driver (an actor) for a ticket (a resource) to ride. In service-for-service exchanges, the actors engage with each other “*to share applied knowledge and skills with other actors to support what they are trying to accomplish*” (Vargo et al., 2020, p. 3). However, Vargo et al. (2020) stress that in developed societies and economies, the service-for-service exchanges may be masked by exchanging, e.g., money and goods. Utilizing a previously used example to exemplify this

argument, when a customer pays for a public transportation ticket, the bus company owner can use the money to procure a service from another provider. Thus, even though the public transportation exchange involves physical money, the actors ultimately exchange a service that benefits them both.

Vargo et al. (2020) underscore that the original goal of the SDL was not to discredit or act as a substitute for the GDL. What is more, it ought to be acknowledged that the SDL is a highly abstract and metatheoretical framework that serves as a guide of marketing thought and business mindset that reflects the current state of affairs (Vargo et al., 2020). Yet, the ever-evolving SDL's contribution remains steadfast by allowing practitioners and researchers alike to better understand the societal and economic exchanges of the 21<sup>st</sup> century.

### ***2.1.1.1 Competing Viewpoints***

As previously defined, a service implies using resources, such as knowledge and skills, by one actor to benefit another actor or oneself (Vargo et al., 2020). Therefore, the value from an exchange is experienced by the actor through applying resources that the actor has available. Additionally, the SDL sees value as being co-created reciprocally between the actors and the beneficiary throughout the exchange, i.e., customer experiences *value in use* (Vargo & Lusch, 2004).

The marketing paradigms are continually developing, and whereas much focus has been put on the shift from the Goods-dominant Logic to the Service-dominant Logic, it ought to be acknowledged that other paradigms that aim to complement, question, or replace the SDL have also evolved. The *customer dominant-logic* (CDL), as introduced by Heinonen et al. (2010), argues that a shortcoming of both GDL and SDL is their inherent provider-dominant approach, and instead, they place the emphasis of CDL on the role of the customer. Whilst they, in line with SDL, argue that value is created in use, they also highlight that the customer's own context and experience influence the perceived value. Vargo and Lusch (2008) do, in their early revisions of the original foundational premises of the SDL, acknowledge that value is phenomenologically experienced, and Heinonen et al. (2010), thereby, derive that it is implied that the experience is an essential aspect of the logic. Yet, further elaboration on the impact of the experience lacks in the foundational theory on SDL. The importance of experiences has, however, been acknowledged by other scholars and Maklan and Klaus (2011) argue that focus has started to shift from goods and services towards the experience related to them, stating that people buy goods and services to fulfill deeper emotional, sensory, and hedonic desires.

Similarly, Schiavone et al. (2020) argue that value is not derived from a purchased product/service, but from the experience a customer has that positively or negatively influences their feelings and emotions. With this argument, it is also highlighted that situational and contextual factors influence the perception of value (Schiavone et al., 2020). Nonetheless, Sandström et al. (2008) emphasize that many companies struggle to understand what provides value to their customers and highlight that concepts such as value and experience are often vaguely defined in the literature.

### ***2.1.1.2 Understanding the Holistic Experience***

It is argued that companies cannot sell an experience and that the company's role is instead to provide contexts that conduce customer engagement where customers create their own unique experience (Gentile et al., 2007). This reasoning can be traced back to a core postulation of the SDL, namely that companies can only offer value propositions (Vargo & Lusch, 2004).

Schembri (2006) posits that the foundation on which SDL is built, is limited by rationalistic assumptions derived from GDL and that the concept of *customer experience* should be embraced to overcome these limitations. Consequently, Meyer and Schwager (2007, p. 118) define customer experience as *"the internal and subjective response a customer has with any direct or indirect contact with a company."* Direct contact is argued to occur mainly during the stage of purchase and use, whereas indirect contact refers to unplanned encounters, such as ads, word-of-mouth, or even simply remembering the company. Lemon and Verhoef (2016) also add that a customer experience is not limited to a single isolated interaction but is rather made up of the cumulative experiences one has had with a company. Thus, they define customer experience as *"a customer's 'journey' with a firm over time during the purchase cycle across multiple touch points"* (Lemon & Verhoef, 2016, p.74) and emphasize its dynamic and iterative nature. Nonetheless, a recent review of existing literature on customer experience by Becker and Jaakkola (2020) concludes that the growing interest in the field has caused a fragmented understanding of the concept and what it entails. Subsequently, they define customer experience as *"non-deliberate, spontaneous responses and reactions to particular stimuli"* (Becker & Jaakkola, 2020, p. 637). Thus, on the one hand, it can be stated that the service experience refers to the main interaction where a service-for-service exchange takes place. On the other hand, it can be reasoned that the customer experience refers to the holistic experience throughout all interactions with all actors.

The concept of customer experience is arguably complex in its multidimensionality. Gentile et al. (2007) propose a general framework, cf. *Figure 2*, which breaks down the concept into five

dimensions that clarify the different components of the customer experience that affect how value is perceived. In line with SDL, the framework by Gentile et al. (2007) acknowledges that a company can only offer a value proposition but builds on this by highlighting that it ultimately is the customer experience that determines the value through their perception.

The first dimension of the customer experience is the **sensorial** component, which is defined as elements that stimulate the senses to create excitement, pleasure, aesthetic enjoyment, and similar (Gentile et al., 2007). The **emotional** component relates to the generation of moods and feelings, which influences one's affective system. The **cognitive** component concerns conscious mental processes that a company can enable within customers. The **pragmatic** component refers to practicality and usability. The **lifestyle** component involves affirmations of a person's values and beliefs through the adoption of specific behaviors that can be encouraged by the company's offerings. Lastly, the **relational component** concerns the social aspect and can be leveraged through offerings that are encouraged to use together. Nevertheless, it is acknowledged that customers themselves are likely not going to be able to differentiate between the components but rather see it as one single experience (Gentile et al., 2007). However, a limitation of the framework is the assumption that the customer experience, and consequently the value perceived, can only result from an interaction with the company, thereby leaving out the influence of the broader context. Furthermore, it is worth pointing out that despite being included in the framework, the concepts of *Value Expectation* and *Value Realization* are neglected in the discussion of Gentile et al. (2007).

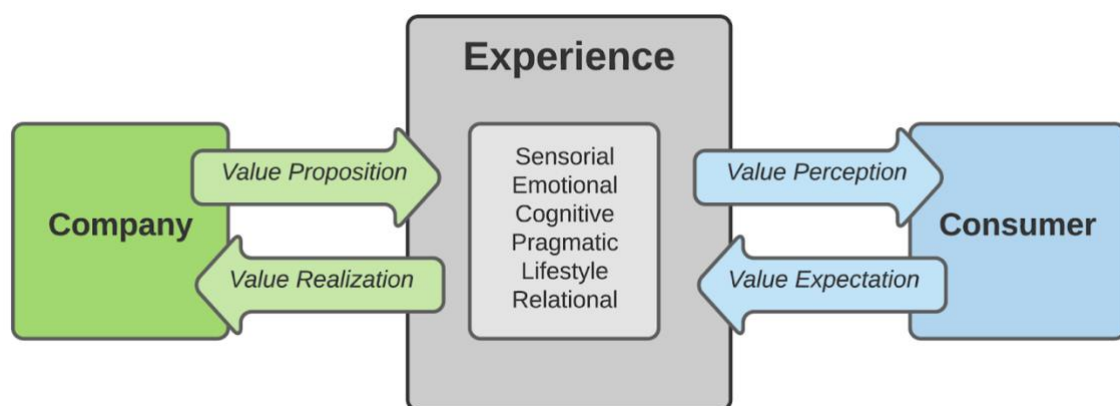


Figure 2 - Customer Experience Framework, adopted from Gentile et al. (2007), own creation.

The traditional view on customer experience has received criticism for adopting a narrow focus by viewing it as something that the company can design and control, whereas a second perspective argues it should instead be looked at from the customer's point of view (Heinonen

et al., 2010). However, Lemon and Verhoef (2016) highlight a third perspective where customer experience is viewed as a co-created experience between the customer and the company. Thus, this notion builds on the SDL where it is argued that all value is co-created. Simultaneously, it extends its understanding by incorporating the emerging importance of customer experience.

Consequently, Lemon and Verhoef (2016) propose a typology of *touch points*, cf. *Table 2*, that reflects a developed view on the direct/indirect contact with a company as proposed through the customer experience definition by Meyer and Schwager (2007). Whereas Meyer and Schwager (2007, p. 3) also define touch points as “*instances of direct contact either with the product or service itself or with representation of it by the company or some third party,*” the development by Lemon and Verhoef (2016) overcomes the critique of the customer experience literature provided by Heinonen et al. (2010) by proposing that the company is not solely in control of the customer experience. Rather, they argue for four different types of touch points that all can influence the customer experience. However, it is also emphasized that touch points are dynamic and that the touch points may be of varying importance. By understanding the touch points that customers are likely to come across and the company's respective power over it, the company can gain leverage over the customer experience (Lemon & Verhoef, 2016).

Touch point	Defined as	Examples (Metro)
<b>Brand-owned</b>	Customer interactions during the experience that are designed and managed by the firm and are under the firm's control	Website, service
<b>Partner-owned</b>	Customer interactions during the experience that are jointly designed, managed, or controlled by the firm and one or more of its partners	Mobile app; requires iOS/Android to function correctly.
<b>Customer-owned</b>	Customer actions that are part of the overall customer experience but that the firm, its partners, or others do not influence or control	Customer comparing the service to other companies
<b>Social/external</b>	The role of others in the customer experience	Other customers sharing their opinions

*Table 2 - Touch Point Typology, adopted from Lemon & Verhoef (2016).*

### 2.1.2 The Actors' Value Processes

The terminology used initially by Vargo and Lusch (2004) received criticism for reinforcing the dyadic relationship in market exchanges by labeling the involved parties as firms and



customers (e.g., Kohli, 2006). However, such terminology served as a constraint to unfolding the zoomed out and holistic view that the SDL meant to offer. Therefore, the need to abandon the firm- and customer-centric orientation became apparent (Vargo et al., 2020).

As a result, Vargo and Lusch (2008) reiterated the used terminology and specified that anyone who participates in a market exchange is an *actor*. Subsequently, these actors co-create value within and among themselves. Using the updated terminology makes the SDL more of an inclusive theoretical framework that rids itself of any pre-established labels implying one's role, e.g., customer or producer (Vargo et al., 2020). What is more, the shifting terminology allows SDL to truly reflect that value is not co-created in a linear relationship but is instead co-created within and across networks of actors (Vargo & Lusch, 2008). Such actor networks may vary in the number of actors involved – from very few to thousands.

Moreover, reiterating the used SDL terminology addressed the commonly used business-to-business (B2B) and business-to-consumer (B2C) orientations in mainstream marketing literature. These marketing orientations tend to create a dyadic orientation with set roles. Thus, in line with the SDL, Vargo and Lusch (2011) proposed a shift to an actor-to-actor (A2A) orientation. By applying this terminology, the SDL does not seek to claim that all actors are alike. Quite the contrary, the A2A orientation seeks to move away from predetermined roles – the roles and identities the actors adopt are negotiated with other actors (Vargo & Lusch, 2016; Vargo et al., 2020). Hence, the altered SDL terminology clarified that value is co-created between and within actor networks through continued integration of resources instead of a manufactured value that is delivered (Vargo & Lusch, 2011). The A2A terminology has, however, been criticized for implying a certain directionality of interaction flow between the actors - actor-**to**-actor (Polese et al., 2017). Therefore, to correctly underscore the essence of the actor networks, it is ultimately proposed to refer to these networks as actor-**for**-actor (A4A) (Polese et al., 2017). In utilizing the A4A terminology, the rigor surrounding the interactions among the actors becomes more profound by establishing that the interactions between actors are multidirectional.

As compared to the GDL, the SDL finds its purpose in value co-creation (Vargo & Lusch, 2004), and consequently, the second axiom of SDL reads, “*value is co-created by multiple actors, always including the beneficiary*” (Vargo & Lush, 2016, p. 18). When the participants in a service-for-service exchange use their resources, they voluntarily create mutually beneficial value in a collaborative process involving many actors (Vargo et al., 2020). The actor who is impacted is hereby regarded as the *beneficiary*. The beneficiary integrates their resources with other actors and, thus, they co-create value (Vargo et al., 2020).

Value, however, does not refer to an economic worth but is instead defined as “*an emergent, positively or negatively valenced change in the well-being or viability of a particular system/actor*” (Vargo & Lusch, 2018, p. 740). It is argued that value is interactional and phenomenological and that value is, thus, something that is experienced individually (Vargo et al., 2020). This is further supported by Åkesson et al. (2014) who argue that customer value is experience driven, co-created, and dependent on the context. However, what has remained relatively unaddressed in the continuously growing body of literature on value co-creation is the possibility of value being negatively valenced (Echeverri & Skålén, 2011; Plé, 2016; Prior & Marcos-Cuevas, 2016). In their extensive research on SDL, Vargo and Lusch (2018) acknowledge that value does not always refer to a positive state, but no further elaboration is made regarding the alternative. Consequently, the term ‘*value process*’ is hereafter used to refer to both positively and negatively valenced co-created values. As the SDL holds an overly optimistic view of value processes, it expects that interactions between different actors will lead to value co-creation (Laud et al., 2019), and Plé (2016, p. 160) labels this excessive optimism in the SDL as a “*co-creation myopia*,” thereby underlining it as a core shortcoming of the Service-dominant Logic.

### **2.1.2.1 Defining Negatively Valenced Value**

The concept of *value co-destruction* is introduced by Plé and Chumpitaz Cáceres (2010). Viewed as the negatively valenced co-created value, they define value co-destruction as “*an interactional process between service systems that result in a decline in at least one of the systems’ well-being (which, given the nature of a service system, can be individual or organizational)*” (Plé & Chumpitaz Cáceres, 2010, p. 431). What is more, Plé and Chumpitaz Cáceres (2010) view value co-destruction as occurring between *service systems*. This terminology is compatible with the SDL and its *service ecosystem* view (Vargo & Lusch, 2011), cf. 2.1.4. The Complex Networks. It is argued that a service ecosystem contains a number of service systems, which, in turn, constitute the service ecosystem (Vargo & Akaka, 2012). Ultimately, the terminology used by Plé and Chumpitaz Cáceres (2010) reflects outdated vocabulary about value processes which was extended by Vargo and Lusch (2011) and the service ecosystem view. Consequently, Plé (2017) adopts and proposes a consistent use of the *service ecosystem* terminology when analyzing value co-destruction processes in service exchanges.

Value co-destruction is argued to take place when an actor is misusing either their own or another actor’s resources, and the well-being consequently decreases (Plé & Chumpitaz Cáceres, 2010). However, value co-destruction is not merely the opposite of value co-creation. Instead, value co-destruction is argued to encompass both neutral and negative interaction

outcomes and, thus, include a broader spectrum of interaction outcomes (Prior & Marcos-Cuevas, 2016).

Furthermore, it is essential to distinguish between value destruction and value co-destruction (Järvi et al., 2018). Value destruction is also known as a 'service failure' and refers to when a company does not meet a customer's expectations. Contrary, value co-destruction refers to an interactional process between two or more actors that happens due to a misintegration of resources (Järvi et al., 2018). As opposed to the GDL, where value is created by a company and destroyed by a customer, value co-destruction can occur between two or more actors where neither actor necessarily is a company. Thus, this perspective can explain why interaction between two actors can lead to co-destruction of value for a third actor without the third actor's involvement. To illustrate - if an actor (a rider) shares a negative service experience with another actor (their friend), it can be reasoned that this interaction could influence the second actor's decision whether or not to engage with the company (the third actor). Consequently, the company's well-being would indirectly decrease, and value would have been co-destroyed.

Nonetheless, the perspective on value co-destruction resulting from the generally accepted definition by Plé and Chumpitaz Cáceres (2010) has also received critique as it argued that the actual outcomes of value co-destruction are unclear (Prior & Marcos-Cuevas, 2016). Whilst a negative emotional state or a loss of tangible resources are two ways co-destruction can occur, Prior and Marcos-Cuevas (2016) expand on this by arguing that an actor will experience value co-destruction through goal prevention and/or net deficits. Here, they define goal prevention as the actor's desires not being realized and net deficits as an actor experiencing disproportionate psychological or emotional costs.

As all interactions require finding a balance between possible benefits and opportunity costs, all interactions can result in the coexistence of co-creation or co-destruction. Co-creation is argued to result from when the different actors' goals align, and as this homogeneity is rare, it is also reasoned that co-destruction is more likely to occur than co-creation (Prior & Marcos-Cuevas, 2016). Järvi et al. (2018) also highlight that different actors may have different perceptions of what actions will lead to the co-creation or co-destruction of value. Nonetheless, the actors that co-destroy value can be the same actors who intended to co-create it (Cabiddu et al., 2019). Plé (2017) emphasizes that it is equally important to understand the mechanism that leads to co-destruction as the ones leading to co-creation. Without this knowledge, it is argued that one cannot identify the disruptive causes (Cabiddu et al., 2019). By identifying the disruptive causes, one could thus avoid the value co-destruction of processes that were initially meant to co-create value.

Plé (2017) highlights that there are different kinds of value and that the concept itself is multifaceted. Cabiddu et al. (2019) further investigate the multiform of value and propose that value is the result of an actor's economic, cultural, social, and symbolic capital. Consequently, Plé (2017) also poses the question of whether the same interaction can lead to one type of value being co-created and another type co-destroyed. Per this, if a consumer was to have an unpleasant experience (negative social value) with a company but would receive a gift card (positive economic value) in return, one could argue that value has been both co-created and co-destroyed for the customer. In this interactive perspective of value processes, it is argued that economic value cannot on its own embody the whole concept of value, but it is instead to be viewed as an articulated set of preferences (Echeverri & Skålén, 2011).

### 2.1.3 The Role of Resources

The outcome of any value process is argued to be a direct result of the actor's use of resources. Thus, in order to have a thorough understanding of the value processes and their influence on well-being, it is key to establish the role that the resources play (Järvi et al., 2008; Plé & Chumpitaz Cácares, 2010). Consequently, how one views resources influences the understanding of how value is co-created or co-destroyed. The view on resources within a business context is a debated topic where three main fields dominate the literature (Baraldi et al., 2012; Bocconcelli et al., 2020). The Resource-Based View (RBV) stems from a neoclassical theory of the firm and views resources as key to gain a competitive advantage. Consequently, the focus lies on attaining and owning resources that can be classified as valuable, rare, inimitable, and organizationally controlled. This view has been critiqued for being empirically underdeveloped, yet it remains widely recognized (Baraldi et al., 2012). Developing on this, Prenkert et al. (2019) discuss the perspective of Industrial Marketing and Purchasing (IMP) first introduced by Håkansson (1982), where the focus lies on understanding the interdependencies of resources rather than the resources per se. It is argued that a resource in itself has no value, but that value is created when resources are combined in a network setting, thus emphasizing the role of the context (Bocconcelli et al., 2020).

Contrary, axiom 3 of SDL holds that *"all social and economic actors are resource integrators"* (Vargo & Lusch, 2016, p. 18). Here, it is argued that value is phenomenologically experienced due to different actors integrating their resources (Bocconcelli et al., 2020). The term '*actors*' was, however, adopted from the IMP perspective as it was argued beneficial to use a more inclusive terminology to refer to individuals, organizations, and other entities engaging in

resource integration (Vargo & Lusch, 2008). Ultimately, the perspective offered by SDL rebukes the dyadic relationship as established in the firm-customer relationship. In contrast, all participants in an exchange are actors who voluntarily integrate resources to co-create value (Vargo & Lusch, 2011). Adopting Lusch and Vargo's (2014, p. 121) definition, resources are, thus, characterized “*as anything, tangible or intangible, internal or external, operand or operant, an actor can draw on for increased viability.*” However, the SDL distinguishes between two groups of resources commonly integrated by the actors - *operand* and *operant* (Vargo & Lusch, 2004). An operand resource is often tangible and needs to be processed to be valuable in an exchange, e.g., natural resources, land, money. Contrastingly, an operant resource is often intangible and can be used in its raw form to build upon other resources, e.g., knowledge and competencies (Vargo & Lusch., 2004; Vargo et al., 2020).

Lusch et al. (2007) argue that a company's competitive advantage is a direct result of how they are able to apply their operant resources compared to other companies. However, this is not to say that operand resources are detrimental. On the contrary, operand resources are part of the value co-creation process but without applying knowledge and skills, i.e., operant resources, value could not be co-created (Vargo & Lusch, 2004). Furthermore, it is found that both the operand and operant resources have a direct influence on the customer experience within the value co-creation process (Tariq et al., 2020).

### **2.1.3.1 The Integration of Resources**

SDL holds that value is created through a favorable integration of one's operand and operant resources, and these resources are assumed to be applied in a manner that creates a positive outcome for the service ecosystem (Vargo & Lusch, 2004; Vargo et al., 2020). Thus, resource integration represents a socio-cultural process that allows actors to become members of a service system where individuals can apply their available resources to create outcomes that result in well-being (Laud et al., 2019). As the co-created value is subject both to the available resources and how they are integrated, it is argued that in order to change the outcome of a value process, the resources and the application of them need to be changed accordingly (Baker et al., 2020).

If resource integration leads to value co-creation, one can derive that value co-destruction results from *resource misintegration* (Plé, 2017). Plé and Chumpitaz Cáceres (2010, p. 432) use the term *misuse of resources* to refer to the misintegration of resources but define it as “*the integration and/or application of the available resources by one service system in a manner that is considered unexpected and/or inappropriate by the other interacting service system.*” Value co-destruction is, thus, argued to occur as a result of misintegrated resources

by one or more actors (Laud et al., 2019). A misintegration of resources can be illustrated by a situation in which a company provides information (operant resource) to a consumer on how to use their product (operand resource), but the consumer applies this knowledge in a different manner (operant resource). Here, one service system applied the available resource (knowledge) in both an unexpected and inappropriate manner. As this resource misintegration would arguably result in the consumer being upset, there is a decline in the consumer's well-being due to value co-destruction. If the experience further impacts the consumer's behavior in relation to the company by, for example, spreading negative word of mouth, it also decreases the well-being of the company.

It is vital to distinguish between an accidental or an intentional misintegration of resources as this strongly influences what one can do to avoid it in the future (Plé & Chumpitaz Cáceres, 2010). In the antecedent example of a possible resource misintegration, the company might have done as much as possible to provide helpful information but failed, resulting in an accidental value co-destruction. However, the consumer might purposely spread negative word of mouth, thus engaging in intentional value co-destruction. Intentional value co-destruction is often the result of one service system aiming to increase their well-being at the cost of another's (Plé & Chumpitaz Cáceres, 2010). This further illustrates that different service systems can experience different value processes as a result of the same interaction.

Arnould et al. (2006) point out that by viewing the customer as a resource integrator, it is essential to acknowledge the nature of the resources available to the customer. Building on this, Plé (2016) identifies and defines types 14 resources compatible with the value processes under the SDL. These resources are introduced and defined in *Table 3*. Whilst the resource types can still be divided into operand and operant resources, this elaboration allows for more in-depth analysis and consequent understanding of the nature of resources. However, the typology proposed by Plé (2016) states that the resources are to be used in the co-creation process by customers. As argued by the later developments of the SDL, actors do not have predefined roles and, hence, are not simply customers or firms. Instead, they are to be regarded as actors that engage in value processes by integrating resources. One can, thus, argue that the comprehensive list by Plé (2016) is limited by its terminology and subsequent perspective, as one can reason that other actors might have other resources at their disposal.

Nonetheless, to illustrate how the resources can take form, an example of what each could be will be given in the context of a metro system. An **informational resource** (1) can be the customer informing the company of their right to the senior discount. An **emotional resource** (2) can be the stress a consumer feels when the train is late. A **physical resource** (3) can be a large suitcase that the customer needs to transport. A **financial resource** (4) can be the

price paid by the customer for a metro ticket. A **temporal resource** (5) can be the time a customer spent waiting for the next train and the time she spent downloading the app to buy a ticket. A **behavioral resource** (6) can be a customer misbehaving towards a ticket controller. A **relational resource** (7) can be a positive memory of when the customer last used the metro and received help. A **social resource** (8) can be a friend that a customer reaches out to when needing help understanding how a new service offering works. A **cultural resource** (9) can be the understanding of a customer regarding the generally accepted behavior on trains and platforms and the ability to adapt to it. The role-related resources can take shape in the customer understanding that they are not the only customer that the metro service is dependent on (**size**, 10), of the expectations that are put on them as customers when using the metro (**awareness**, 11), and **clarity of the role** (12) they have to fulfill. A **customer ability resource** (13) can be the customer's belief that they know how to get to their destination in the quickest way. Lastly, the **customer willingness resource type** (14) can be the willingness a customer has to purchase a ticket.

Resource Type	Definition
<b>1. Informational</b>	Information that customers provide to the firm or employee and/or mental efforts that customers make during co-creation.
<b>2. Emotional</b>	All the emotions that customers may feel during co-creation.
<b>3. Physical</b>	Goods that customers bring to the co-production (including their own body) so the firm or employee can act on them.
<b>4. Financial</b>	The price paid by customers to the firm to obtain the tangible or the intangible output of co-creation
<b>5. Temporal</b>	Duration of participation, including the time that customers spend to understand how co-creation works (even before entering it).
<b>6. Behavioral</b>	How customers behave during interpersonal interactions with service employees during co-creation.
<b>7. Relational</b>	Customers' state of mind, resulting from past service encounters when starting a new co-creation.
<b>8. Social</b>	Networks of relationships with others that customers rely on in co-creation, including " <i>traditional demographic groupings (families, ethnic groups, social class) and emergent groupings (brand communities, consumer tribes and subcultures, friendship groups) over which customers exert varying degrees of command.</i> " (Arnould et al., 2006, p. 93)
<b>9. Cultural</b>	Amounts and kinds of knowledge of cultural schemas, including specialized cultural capital, skills and goals that customers use in co-creation.

<b>10. Role size</b>	The proportion of the service (tangible or intangible output resulting from co-creation) produced and delivered by the customer.
<b>11. Role awareness</b>	The extent to which customers are aware of the role they must fulfill in co-creation to get the output of that co-creation.
<b>12. Role clarity</b>	The extent to which customers understand the role they must play in co-creation.
<b>13. Customer ability</b>	The extent to which customers have and believe they have the appropriate knowledge, competence, time, etc., to participate in co-creation.
<b>14. Customer willingness</b>	The extent to which customers are ready to do what the firm or the employee expects to be done in co-creation.

*Table 3 - Resource Typology, adapted based on Plé (2016), edited.*

#### 2.1.3.1.1 Resource Misintegration Manifestations

To enhance the understanding of resource misintegration and the processes leading to it, Laud et al. (2019) introduce a typology outlining ten different ways in which resources can be misintegrated by one or more actors, cf. *Table 4*. This typology allows for identifying and understanding both accidental and intentional value co-destruction and, thus, serves as a guiding framework. However, the context of this typology is limited to micro-level interactions. Whilst it goes further than only consumer-company interactions by acknowledging actors such as suppliers or online communities, it does not take on an ecosystem perspective (Laud et al., 2019). Nonetheless, it allows for a practical understanding of the value co-destruction process and how it influences well-being. Thereby, it indirectly meets the critique of Prior and Marcos-Cuevas (2016) regarding the lack of understanding of co-destruction outcomes by expanding on the theory on how value co-destruction can take form.

The first type of resource misintegration is concerned with the **lack of resources** (1) to integrate. This refers to when one or more actors believe that the resources they need are unavailable to them. Using the metro system's context again, this can take form in the lack of an elevator restricting an actor from accessing the platform. **Blocked access to integrate resources** (2) is a deliberate choice of one or more actors to restrict resource integration. This can take the form of the company only accepting specific payment methods. **Unwillingness to integrate resources** (3) is another deliberate choice by one or more actors and can take the form of the metro company withholding information regarding the reason for train delays. A **misunderstanding on how to integrate resources** (4) refers to an accidental misintegration caused by an unsuccessful understanding. This can take the form of the actors misunderstanding each other's expectations. For example, the Metro might raise the ticket



prices to keep offering a service of satisfactory quality as they think this is what is most important to the consumer, whilst the consumer might prefer a lower quality as long as the ticket price stays the same. Here, the company is deliberately aiming to co-create value but, in the process, accidentally co-destroys value due to a misunderstanding on how to integrate resources. A **disagreement on how to integrate resources** (5), however, can refer to when actors understand each other's expectations but disagree on how to meet them. This can be both accidental and deliberate by one or more of the actors. A **deceptive integration of resources** (6) is a deliberate misintegration. This can take the form of a consumer registering a false complaint to receive goodwill. For example, if a consumer deceptively informs the company that she injured herself from a fall due to the platform not being adequately cleared of ice and she receives free metro rides, a deceptive integration of resources has occurred. A **negligent integration of resources** (7) refers to deliberate carelessness. In turn, this can take the form of the Metro being informed about slippery platforms but choosing to neglect the potential consequences. An **incapacity to integrate resources** (8) is a deliberate action by a disqualified actor. This can refer to a customer being refused on the Metro with her bike during rush-hours, despite knowing one cannot bring a bike at times. An **excessive integration of resources** (9) is an accidental or deliberate extreme application of resources by one or more actors. This can take the form of a community of consumers devoting a disproportionate amount of resources to supporting a company. Lastly, a **coercive integration of resources** (10) is a deliberate use of resources that forces an actor into integrating their resources in an unwanted way. This can take the form of the metro riders boycotting the Metro Company and its services for various reasons, thus, forcing the Metro to accommodate their requests.

Resource misintegration type	Definition	Intentionality and stage of resource integration
<b>1. Lack of resources to integrate</b>	Unavailability of resources or belief of such by at least one interacting actor.	Accidental or deliberate misintegration in terms of accessing resources.
<b>2. Blocked access to integrate resources</b>	Deliberate restriction or prevention of resource integration by at least one interacting actor.	Deliberate misintegration in terms of accessing resources.
<b>3. Unwillingness to integrate resources</b>	Deliberate withholding or withdrawal of resources by at least one interacting actor.	Deliberate misintegration in terms of accessing resources.
<b>4. Misunderstanding of how to integrate resources</b>	Failure to understand how to correctly integrate resources by at least one interacting actor.	Accidental misintegration in terms of adapting resources.

<b>5. Disagreement on how to integrate resources</b>	Failure to agree on how best to integrate resources by at least two interacting actors.	Accidental or deliberate misintegration in terms of adapting resources.
<b>6. Deceptive integration of resources</b>	The deliberate concealment or misrepresentation of resource integration by at least one interacting actor.	Deliberate misintegration in terms of adapting resources.
<b>7. Negligent integration of resources</b>	Deliberate inattention and/or carelessness in the integration of resources by at least one interacting actor.	Deliberate misintegration in terms of adapting resources.
<b>8. Incapacity to integrate resources</b>	Disqualification to integrate resources by at least one interacting actor.	Deliberate misintegration in terms of combining and applying resources.
<b>9. Excessive integration of resources</b>	Extreme application of resources by at least one interacting actor.	Accidental or deliberate misintegration in terms of combining and applying resources.
<b>10. Coercive integration of resources</b>	Involuntary, forced or constrained resource integration of at least one interacting actor.	Deliberate misintegration in terms of combining and applying resources.

Table 4 - Typology of Resource Misintegration, adopted from Laud et al. (2019).

## 2.1.4 The Complex Networks

The holistic nature of the SDL prompts the need to understand value co-creation on a systemic level. By adopting a broader understanding of service-exchanging actors, it becomes possible to understand how the actors act within and across interconnected networks of value co-creating actors. The systemic level can be understood by adopting the notion of a *service ecosystem* which is defined as a “*relatively self-contained, self-adjusting system of resource-integrating actors connected by shared institutional arrangements and mutual value creation through service exchange*” (Vargo & Lusch, 2016, pp. 10-11).

The SDL argues that the service ecosystem actors do not receive any prefabricated value from engaging in an exchange (Vargo & Lusch, 2004). On the contrary, actors co-create value that is unique to themselves, and, thus, axiom 4 posits that “*value is always uniquely and phenomenologically determined by the beneficiary*” (Vargo & Lusch, 2016, p. 18). In other words, value co-created within a service ecosystem may differ for every actor due to their varying social contexts and, thus, the nature of the co-created value cannot be generalized in a service-for-service exchange (Vargo & Lusch, 2008; Vargo et al., 2020). Therefore, actors

to an exchange are said to simultaneously co-create value-in-use and value-in-context (Chandler & Vargo, 2011; Vargo et al., 2020).

#### ***2.1.4.1 Conceptualizing Service Ecosystems beyond the SDL***

It ought to be acknowledged that the concept of a service ecosystem has remained widely under-researched and neglected (Frow et al., 2019). Yet, as originally denoted by Vargo and Lusch (2008; 2018), actors engage in value co-creation processes within a service ecosystem to increase well-being. However, the SDL does not provide a sufficient account of the service ecosystem concept, its functioning, and ultimately its impact on well-being (Frow et al., 2019).

To overcome the insufficiencies of the SDL, it is argued that service ecosystems consist of three mutually interdependent levels of aggregation - micro, meso, and macro (Van Heuvelen, 2018). However, it can be said that previous research favored focusing on the micro or macro levels and, thus, disregarded the role of understanding ecosystems on the meso level. Frow et al. (2019, p. 2658) claim that *“studies of the meso level are especially valuable, as here the well-being of the entire ecosystem is evident, reflecting changes at higher and lower levels of aggregation.”* What is more, the multilevel nature of a service ecosystem allows for a better understanding of the interconnected actors and their relationships (Frow et al., 2019).

Being part of a service ecosystem translates into the actors sharing a given worldview, which impacts and coordinates their intentions, interactions, and practices (Bourdieu, 1977; Taillard et al., 2016). Only if the service ecosystem actors share a worldview, then they get together to engage in mutually beneficial exchanges in which their resources are utilized. Hereby, the complexity of service ecosystems is further promulgated and cannot, hence, be reduced to a stable, non-fluid concept with boundaries (Chandler & Vargo, 2011). Quite the contrary, service ecosystems are in a continuous process of evolving and reconstructing themselves, and, as such, the three levels of aggregation are variable and context-dependent (Frow et al., 2019).

In pursuit of conceptualizing the relationship between service ecosystems and well-being, Frow et al. (2019) put forward a framework based on the theoretical foundations of the SDL to visualize the persistent emergence and fluidity of the ecosystem concept. They argue that actors within a service ecosystem share a worldview, which increases the efficiency of resource integration and, thus, magnifies the possibility of value co-creation. In doing so, value co-creation is argued to increase the service ecosystem's well-being (Frow et al., 2019). Within the service ecosystem and across the three aggregation levels are practices shared by the actors and institutions, e.g., behavioral norms, regulating the interactions and exchanges among the actors. Nonetheless, the framework by Frow et al. (2019) distinguishes itself from

the SDL narrative (Vargo & Lusch, 2016) by acknowledging that there are both supportive and disruptive factors that stimulate or inhibit the service ecosystem's well-being.

The abovementioned factors influencing well-being can be both internal and external from the service ecosystem's perspective. The supportive factors that improve well-being can be new resources that are brought into the exchange by the actors. This can be exemplified by creating a network of metro riders who cooperate, i.e., integrate their resources, to improve the metro system through idea crowdsourcing (Frow et al., 2019). By doing so, active actor participation enhances the service ecosystem's well-being. Moreover, it is argued that external positive environmental influences can improve the ecosystem's well-being by, e.g., a well-performing national economy in growth (Frow et al., 2019). Furthermore, service ecosystems consist of keystone actors (Iansiti & Levien, 2004) who can act as leaders and activists. The keystone actors can be those who instigate the network of metro riders to crowdsource ideas. In doing so, they stimulate supportive activities with a positive impact on the service ecosystem and may, thus, propel value co-creation processes (Frow et al., 2019).

On the other hand, disruptive factors can test the service ecosystem's viability and robustness (Banoun et al., 2016). Similarly, it is argued that robust service ecosystems need *"to rebound from disturbances and emerge"* (Frow et al., 2019, p. 2666). Among the disturbances are the so-called stressors (minor and more predictable disturbances) and environmental jolts (major and less predictable disturbances) (Frow et al., 2019). For example, should a significant thunderstorm cut off the supply of electricity to the metro network, it is argued that all levels - micro, meso, and macro - are impacted by such a disturbance. Contrastingly, if there is a signal error at a specific metro station and the train cannot leave, the meso and micro levels are impacted. Lastly, Frow et al. (2019) acknowledge that sometimes the actors themselves can act in a way that negatively impacts the service ecosystem well-being - hence, this behavior may culminate in value co-destruction (Plé & Chumpitaz Cacerés, 2010).

Ultimately, the conceptual framework postulates that the service ecosystem emerges based on the actors' shared worldview (Frow et al., 2019). It is argued that the ecosystem continues to change across the levels of aggregation and remains highly dynamic. However, the ultimate goal is to strengthen the ecosystem, its robustness, and resilience in order for value to be co-created ongoingly. The framework by Frow et al. (2019) is visually depicted in *Figure 3*.

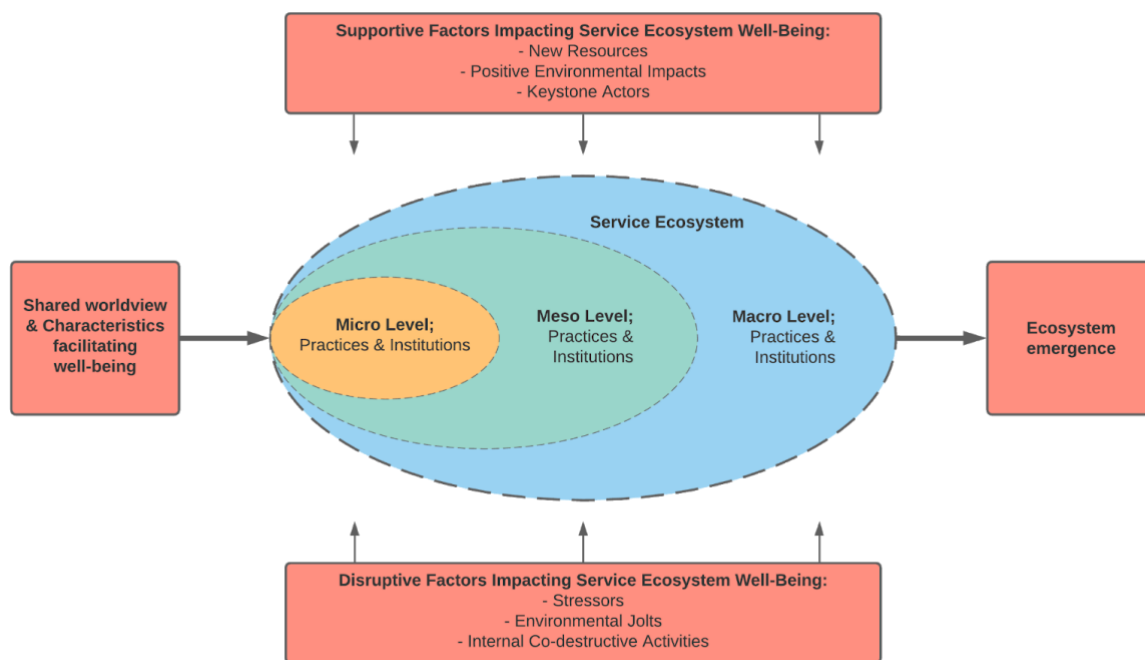


Figure 3 - Conceptualization of Service Ecosystem Well-being, adopted from Frow et al. (2019), edited, own creation.

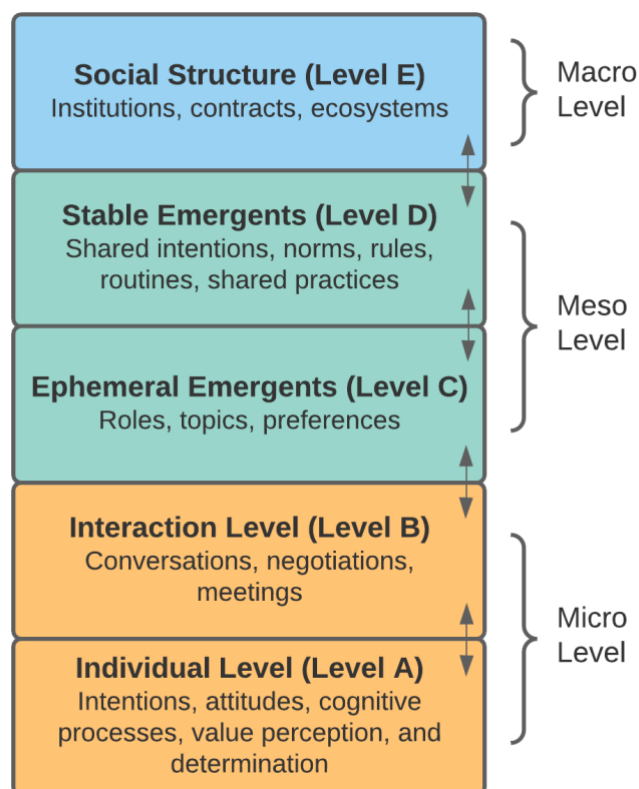
#### 2.1.4.1.1 The Emergence of Service Ecosystems

Taillard et al. (2016) and Frow et al. (2019) subscribe in their work to the concept of social emergence that is theorized by Sawyer (2005), who described the connection between how individual and shared intentions, i.e., a shared worldview, eventually result in the emergence of a social structure. In their research, Taillard et al. (2016) adapted Sawyer's social emergence paradigm to the process of service ecosystem emergence.

A social structure, i.e., service ecosystem, emerges on five individual levels - Level A through Level E (Sawyer, 2005). Yet, it ought to be acknowledged that only when the five levels coexist as a sum, a service ecosystem can emerge (Taillard et al., 2016). The **Individual Level** (Level A) and **Interaction Level** (Level B) are argued to be the foundation of the micro level of aggregation within a service ecosystem (Taillard et al., 2016). The Individual Level is constituted by the actors' individual intentions, attitudes, and value perception. The Interaction Level is embodied through the actors' conversations, interaction, and collaboration among the actors to improve resource integration through service exchanges. The meso level of a service ecosystem comprises further two levels identified by Sawyer (2005) and adopted by Taillard et al. (2016) - Ephemeral Emergent Level and Stable Emergent Level. The **Ephemeral Emergent Level** (Level C) is composed of the roles that the actors take on within the service ecosystem, and the frame for interactions between the actors begins to form. Thus, Level C

begins to constrain the preceding Levels A and B (Taillard et al., 2016; Sawyer, 2005). The **Stable Emergent Level** (Level D) of the social emergence paradigm revolves around the service ecosystem sharing norms, rules, practices, and various routines among and between its actors. Hence, Taillard et al. (2016) claim that Level D is more formalized and stable, which, in turn, enables it to impact the last level - Level E. Thus, the highest level of the paradigm is the **Social Structure Level** (Level E) which also embodies the macro level of a service ecosystem (Taillard et al., 2016; Sawyer, 2005). On this level, institutional arrangements are settled and formalized and are embodied through contracts, regulations, laws, etc.

As previously stated, the five levels constantly influence each other. Therefore, there are emergence processes in a given service ecosystem that are organized top-down and bottom-up simultaneously. The framework as established by Sawyer (2005) and adapted by Taillard et al. (2016) is visualized in *Figure 4*.



*Figure 4 - Social Emergence Paradigm, adopted from Taillard et al. (2016) based on Sawyer (2005), edited, own creation.*

## 2.1.5 The Contextuality of Value

It must be acknowledged that value is not co-created in a vacuum. Quite the contrary, actors co-create value within a specific context (Chandler & Vargo, 2011). To that end, Vargo and Lusch (2016, p. 6) brought forward the structural concept of *institutions*, which are defined as “*rules, norms, meanings, symbols, practices, and similar aides to collaboration.*” These institutions embody a set of guiding behaviors that should be enacted in an exchange to prompt value co-creation (Vargo et al., 2020). The context within which value co-creation occurs in a service ecosystem “*consists of resource integrating practices that are structured by institutional rules and norms*” (Frow et al., 2019, p. 2665). As posed by axiom five of the SDL, when several interrelated institutions are assembled, they create an *institutional arrangement* (Vargo & Lusch, 2016). Such institutional arrangements may facilitate or hinder the value co-creation processes in markets, exchanges, and service ecosystems. Thus, Vargo and Lusch (2011) acknowledged that actors do not exchange services without boundaries and constraints. All in all, Vargo and Lusch (2016) concurringly argue that institutions are crucial to service exchanges as actors operate within ever more complex contexts and resource integration processes that occur in overlapping ecosystems.

### 2.1.5.1 Sharing a Worldview

Despite the apparent importance of the aforementioned institutions and respective arrangements to the value processes, Vargo and Lusch (2016) do not comprehensively account for these and their functioning. Thus, to better comprehend the underlying principles of value contextuality, the foundational SDL literature must be transcended.

Taillard et al. (2016) argue that the actors, who are interdependent and interconnected, act with *shared intentions* as this is a prerequisite for a service ecosystem to emerge (Frow et al., 2019). In other words, the shared intentionality of a service ecosystem is essential as they serve the “*attraction, selection, and retention of ecosystem actors and their resources*” (Frow et al., 2019, p. 2664). However, it ought to be acknowledged that shared intentions do not synonymously mean that all the actors within the service ecosystem are keen on pursuing the same goals (Taillard et al., 2016). Actors within a service ecosystem balance their individual and the shared intentions, which ultimately enable collective agency. Hence, it is of paramount importance that actors have shared intentions to achieve mutually beneficial value co-creation.

Moreover, Taillard et al. (2016) share Frow et al.’s (2019) perspective on the three levels of aggregation within a service ecosystem - micro, meso, and macro levels. It is claimed that the

actors' individual intentions are apparent on the micro level. However, the meso and macro levels can only exist if there is shared intentionality among the actors (Taillard et al., 2016). Therefore, to account for the shared intentions and institutions, the empirical inquiry must focus on the meso or macro levels. Yet, should the shared intentions or institutions change on the meso level, Frow et al. (2019) argue that it impacts the intentions on both the micro and macro levels.

What is more, Taillard et al. (2016, p. 2974) assert that a “*shared intentionality is a form of structuring or institutional arrangement with recursive properties: shared intentions constrain and guide individual intentions.*” Thus, a direct link can be established between the SDL literature and Taillard et al.'s (2016) account. Additionally, Bourdieu (1977) postulates that shared practices and worldview on the meso level increase the resilience of a service ecosystem from external disruptions, and also, the ecosystem's well-being improves. In contrast, if there is no shared worldview present in a service ecosystem, it hinders the possibilities of mutual collaboration and coordination between the actors (Clegg & Cooper, 2008). Arguably, a lack of a shared worldview may lead to the actors only considering their individual intentions and, thus, result in value co-destruction.

#### ***2.1.5.2 Understanding the Impact of the Physical Environment***

Whereas institutions influence the behavior of actors, the value perceived is also influenced by the physical context in which the process occurs. Kotler (1973) introduced the term ‘*atmospherics*’ to refer to the physical design and decor elements that make up the surroundings in which consumption takes place. However, Bitner (1992) elaborates on this and proposes the term ‘*servicescape*’ to refer to the human-made physical environment where customers and employees interact. A servicescape is made up of multiple atmospherics, and through this, the physical setting can either hinder or facilitate the ability of customers’ achieving their goals. Consequently, the atmospherics also affect the behavior of customers, and it is argued that it can either cause them to engage in approach or avoidance behavior (Turley & Milliman, 2000).

However, the atmospherics do not only influence the customers; they are also argued to influence the employees’ motivation and satisfaction (Bitner, 1992). Thus, it is implied that the well-being of employees is influenced, which subsequently affects their participation in the value processes with other actors. Nonetheless, to create an environment where a positive outcome of the value processes is likely to occur, it is crucial to acknowledge and adjust the atmospheric elements based on the customers’ and employees’ needs (Bitner, 1992). Bitner (1992) further highlights the effect the physical environment has on the customer perception



of the service experience, and it can be reasoned that it, thereby, also affects the customer experience as the service experience, as established previously, is part of this. However, later developments in the service theory field have called for a more inclusive understanding of the value-creating entities (Vargo & Lusch, 2011). Thus, one can argue that the physical environment should account for the well-being of all possible actors, and by extension, of the whole service ecosystem.

Tombs and McColl-Kennedy (2003) highlight that the perception of the environment is affected by the context. A metro rider commuting to work might not be overwhelmingly bothered by a busy train, whilst the same environment might cause great frustration for a metro rider who is trying to navigate their way with large suitcases. Consequently, they argue that the environment is made up of contextual, physical, and social elements. Rosenbaum and Massiah (2010) expand on this by suggesting the servicescape is comprised of physical, social, socially symbolic, and natural environmental dimensions. By this, they propose that the perception of a servicescape is not entirely controllable by a firm as it is composed of elements that are subjective and immeasurable. However, the dimension focusing on the natural environment has gained increasing interest by research in public health, as it is found that the commercial setting can contribute to societal well-being by facilitating restorative environments (Rosenbaum & Massiah, 2010). Ultimately, they reason that the ideal servicescape for a consumer's well-being is one that is *"physically appealing, socially engaging, symbolically welcoming, and naturally restorative"* (Rosenbaum & Massiah, 2010, p. 438).

## 2.2 Change Through Service

Global economies are saturated with services that, in turn, constitute the majority of their GDP (Ostrom et al., 2010). To sustainably grow the service sector, researchers agree and posit that a new stream of practice-oriented research must seek ways of ensuring a continued increase of well-being in societies and economies (Bitner & Brown, 2008; Ostrom et al., 2010). Concurring, Dagger (in Ostrom et al., 2010, p. 10) argues that *"service consumption influences customer well-being, including life satisfaction, perceived quality of life, and overall happiness."* Rosenbaum (2015, p. 363) criticizes early service research for not being able to *"solve real problems that affect consumer's lives and experiences and enhance consumer welfare..."* Interestingly, what constitutes well-being remains a topic of academic debate and disagreement with varying definitions based on the given research field (Leo et al., 2019). Nonetheless, well-being shall not only be monitored and quantified in terms of monetary measures (Anderson et al., 2013; Black & Gallan, 2015). This perspective of well-being is in

agreement with the Service-dominant Logic as an improvement in well-being stems from the collaborative value co-creation processes and the interaction between actors (Vargo & Lusch, 2016). Thus, this paper defines well-being broadly as “*people's cognitive and affective evaluations of their lives*” (Diener, 2000, p. 34).

However, despite the positive contribution of the SDL to service research, the SDL resides at a high level of abstraction, limiting its applicability in practice in the pursuit of improved well-being. To overcome the shortcomings of the SDL and bridge the research gap, researchers established an emerging area of *transformative service research* (hereafter TSR), which is defined as “*the integration of consumer and service research that centers on creating uplifting changes and improvements in the well-being of consumer entities: individuals (consumers and employees), communities and the ecosystem*” (Anderson et al., 2011, p. 3).

### **2.2.1 Transformative Service Research**

Since its emergence as a research priority, TSR has established itself within consumer and service research as the stream seeking to understand well-being better (Anderson & Ostrom, 2015; Ostrom et al., 2010). Anderson et al. (2013) argue that as humans are immersed in co-creating value through service offerings and interaction with service entities, it is likely to impact well-being. However, TSR has been, until now, predominantly focused on well-being within health, financial, and educational services (e.g., Rosenbaum, 2015, Anderson et al., 2013) as an expression of criticism towards other service research which was preoccupied with managerial outcomes only (Rosenbaum, 2015). Thus, the TSR research scope remains limited to other areas in which social and economic exchanges occur. What is more, Anderson et al. (2013) claim that information asymmetries often characterize service exchanges. Therefore, some actors may possess more information and expertise due to their role in a service exchange, e.g., doctor-patient service exchange. Such asymmetry may arguably lead to an impact on an individual's well-being. Consequently, service providers bear some responsibility for ensuring that an individual's well-being is considered, and the service exchange is not designed to lead to a decrease in well-being (Anderson et al., 2011). This asymmetry can ultimately lead to a co-destruction of value between the actors due to a flawed service design or service delivery.

The connection between value co-destruction and an actor's well-being often is ignored (Laud et al., 2019). This is despite co-destruction being defined as the decrease in at least one service system's well-being (Plé & Chumpitaz Cáceres, 2010). Ultimately, it is of apparent importance to identify and understand how value is being co-destroyed to ensure the increasing well-being of the whole service ecosystem. Hence, TSR focuses on preventing

value co-destruction and instead strives to increase overall well-being through stimulating the value co-creation process within a service ecosystem (Anderson & Ostrom, 2015).

### **2.2.1.1 Improving Well-being**

Stimulating change through service provision, which leads to an increase in both individual and collective well-being, is at the core of TSR (Anderson et al., 2013). Traditional key performance indicators applied in businesses – revenue or customer satisfaction - cannot capture and measure well-being outcomes. Thus, Anderson et al. (2013) posit that well-being must be measured separately based on relevant indicators. In doing so, well-being outcomes can be categorized as *eudaimonic* or *hedonic* (Anderson et al., 2013).

It is argued that eudaimonic well-being outcomes describe the realization of potential on individual, collective, and ecosystem levels (Anderson et al., 2013; Kuppelwieser & Finsterwalder, 2016). In other words, this form of well-being serves the purpose of “*human flourishing*” (Haybron, 2008, p. 21). Eudaimonic well-being outcomes can be exemplified through increasing literacy, decreasing health and well-being discrepancies, or having access to a service (Anderson et al., 2013). In contrast, hedonic well-being is grounded in the notions of pleasure and happiness (Diener & Lucas, 1999). Anderson et al. (2013, p. 1206) posit that “*the presence of happiness, satisfaction, and joy in employees and consumers reflects hedonic well-being, and the presence of negative affect, such as tension, fear, strain, and stress, reflects the absence of hedonic well-being.*” Hence, they argue that a service exchange's goal is to stimulate and for the service ecosystem actors to experience hedonic well-being. As such, this form of well-being can be experienced by actors on the individual and collective levels.

### **2.2.1.2 Service Ecosystem Well-being**

Concurring with the postulations and service ecosystem well-being conceptualization by Frow et al. (2019), cf. 2.1.4.1. Conceptualizing Service Ecosystems beyond the SDL, Leo et al. (2019) argue that even though the concept of well-being has in recent years been gaining more attention, the focus lies within understanding the individual well-being. However, the researchers claim that well-being must be studied on a broader level where individuals are interrelated and interdependent on each other's actions and behaviors (Frow et al., 2019; Leo et al., 2019). By studying individual well-being, the researcher loses the systemic point of view and, hence, the full understanding of well-being cannot be gained (Anderson et al., 2013). Thus, it is argued that one must seek to understand collective well-being on the meso and macro levels of a service ecosystem. Nonetheless, micro level well-being remains the rudimentary unit of understanding well-being as the individual experiences ultimately impact

the meso and macro well-being levels of an ecosystem. All in all, it is argued that service ecosystem well-being must be analyzed holistically as *“the collective well-being embodies a more transformational approach towards cultivating well-being through the acknowledgment of interactions between multiple actors”* (Leo et al., 2019, p. 767). The notion of collective well-being stems from the service ecosystem actors who are assumed to share a converging understanding of well-being.

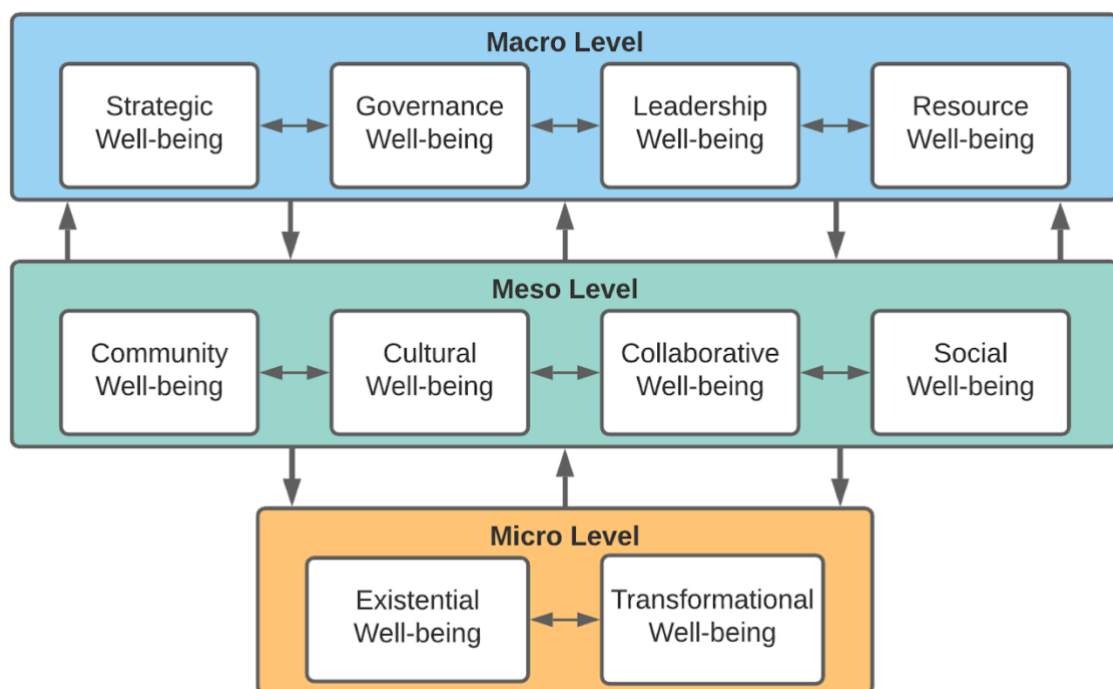
Therefore, Leo et al. (2019) offer a service ecosystem well-being typology consisting of ten domains of well-being that can be found on the higher levels of ecosystem aggregation - the meso and macro levels. The well-being domains are presented and defined in *Table 5*.

Well-being Domain	Definition
<b>1. Strategic</b>	Extent to which a service ecosystem supports its actors to function well in seeking and seizing new opportunities and goals in a way that contributes to the betterment of the service ecosystem.
<b>2. Governance</b>	Extent to which a service ecosystem is able to offer well-functioning policies and procedures to its actors in a way that contributes to the betterment of the service ecosystem.
<b>3. Leadership</b>	Extent to which a service ecosystem’s leaders function well in motivating its actors to create fulfillment in a way that contributes to the betterment of the service ecosystem.
<b>4. Resource</b>	Extent to which a service ecosystem functions well in providing resource access to fulfill the needs of its actors in a way that contributes to the betterment of the service ecosystem.
<b>5. Community</b>	Extent to which a service ecosystem functions well in providing a sense of belonging, inclusion, and support within a broader external network in a way that contributes to the betterment of the service ecosystem.
<b>6. Social</b>	Extent to which a service ecosystem functions well in providing social connections to fulfill actors’ needs for social integration, closeness and bonding in a way that contributes to the betterment of the service ecosystem.
<b>7. Collaborative</b>	Extent to which a service ecosystem builds and maintains well-functioning relationships with its actors in a way that contributes to the betterment of the service ecosystem.
<b>8. Cultural</b>	Extent to which a service ecosystem functions well in offering a climate that provides recognition and nurtures shared practices and values among its actors in a way that contributes to the betterment of the service ecosystem.
<b>9. Existential</b>	Extent to which a service ecosystem functions well in providing the actors with a sense of purpose and self-realisation to achieve their potential in a way that contributes to the betterment of the service ecosystem.

<b>10. Transformational</b>	Extent to which a service ecosystem functions well in offering its actors opportunities to learn and apply new (i.e., external to the service system) resources in a way that contributes to the betterment of the service ecosystem.
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*Table 5 - Service Ecosystem Well-being Domains, adopted from Leo et al. (2019), edited.*

Leo et al. (2019) argue that the ten domains exist and demonstrate themselves on the three levels of service ecosystem aggregation - micro, meso, and macro - thus, showcasing their bi-directionality. However, the well-being domains have been categorized so that they belong to one of the levels and simultaneously impact the remaining levels (Leo et al., 2019). It is claimed that the macro level consists of strategic, governance, leadership, and resource well-being. Additionally, community, cultural, collaborative, and social well-being can be showcased on the meso level in particular. Subsequently, existential and transformational well-being exists on the micro level of aggregation (Leo et al., 2019). The mutual and bi-directional interdependence between the domains is visually depicted in *Figure 5*.



*Figure 5 - Service Ecosystem Well-being Domains Framework, adopted from Leo et al. (2019), edited, own creation.*

The upcoming paragraph will exemplify the Leo et al. (2019) typology using the Copenhagen Metro case. The **strategic well-being** (1) postulates that giving the metro riders or the employees a voice and platform, it will allow the Metro to collect innovative ideas which will

lead to improving the overall service and customer experiences and, hence, the service ecosystem's well-being (Narver & Slater, 1990). Further, **governance well-being** (2) argues that if the Metro puts down rules of conduct for the riders when being on the train or at the station, it gives the actors better coordination and, hence, enhances the resource integration process and ultimately, well-being increases (Auh et al., 2014; Edvardsson et al., 2014). **Leadership well-being** (3) claims that the riders who act as activists - in opposing the Metro by complaining about an excessive amount of noise being noticeable above the ground and around the M3 Line - help their fellow riders to increase their self-efficacy and mobilize their resources (Ejsing, 2020; Ilies et al., 2005). Moreover, **resource well-being** (4) declares that both operant and operand resources (Vargo & Lusch, 2004) are used in exchanges between actors and can increase the ecosystem's well-being. If a passenger asks the platform staff about which direction they should take the metro in, the actors exchange operant resources, leading to an overall ecosystem well-being increase. **Community well-being** (5) can be observed if the service ecosystem actors believe they are part of a broader metro rider community across which they can share resources and support each other (Sirgy et al., 2010). In addition, **social well-being** (6) can be exemplified by a shared social bond and relationships between the metro riders who enjoy being on the metro even during rush hours (Wrightsmann, 1991). Contrastingly, those who do not enjoy being in crowded spaces may be dissatisfied, feel unwell and ultimately negatively impact the service ecosystem's well-being. **Collaborative well-being** (7) claims that when actors feel empowered and engage within the service ecosystem with other actors, it improves mutual recognition and trust (Leo et al., 2019). Thus, when a passenger asks a platform staff for information, they exchange resources, and the actors recognize each other's role within this given service-for-service exchange. By the same token, **cultural well-being** (8) is based on the notion that actors share expectations, practices, and behaviors, i.e., institutions (Vargo & Lusch, 2011), that give purpose and a shared worldview to the service ecosystem (Frow et al., 2019). If the riders comply with the ban on smoking and any open fire on the train platform, it can be argued that the service ecosystem's cultural well-being increases as the actors respect the institutional arrangements. **Existential well-being** (9) is exemplified by riders who take the metro as a sustainable way of transporting themselves instead of driving a fossil fuel car. Thus, such an actor acts congruently with their deeply held values (Waterman, 1992). Lastly, **transformational well-being** (10) is showcased when a rider learns from another rider about the functioning and performance of the automated trains. Hereby, the authors exchange their resources, i.e., knowledge, and, thereby, a new resource is acquired. This will improve the service ecosystem's effectiveness and well-being as the actors have more knowledge which facilitates better participation in exchanges (Bitner et al., 1997).

### 2.2.1.3 TSR & SDL

Compared to the widely accepted and mature Service-dominant Logic (e.g., Vargo & Lusch, 2004), transformative service research is still in its infancy and has not received much attention (Kuppelwieser & Finsterwalder, 2016). However, it is argued that the emergence of TSR and its interconnection with other theoretical streams may be confusing researchers and eventually prevent TSR from achieving its overall goal of stimulating real positive change within ecosystems. Kuppelwieser and Finsterwalder (2016) advocate that by combining and simultaneously applying both frameworks, it is possible to deepen our understanding of service and service exchanges. To do so, they argue that *“more empirical work, such as specific cases on well-being and value co-creation, but also the operationalization of constructs and concepts, is important”* (Kuppelwieser & Finsterwalder, 2016, p. 96).

When comparing the two frameworks, it becomes noticeable that their main difference lies within the differing overall goal. Whereas the TSR focuses on *improving overall well-being through co-creation* (Anderson et al., 2013), the SDL propagates the *stimulation of mutually beneficial value co-creation processes* (Vargo & Lusch, 2004). Kuppelwieser and Finsterwalder (2016) call for TSR and SDL to be fused and used integratively instead of compartmentalization in pursuit of overcoming their respective shortcomings – SDL's abstractness and TSR's developmental infancy.

It ought to be acknowledged that even though the TSR and SDL have an overall different focus, both frameworks find mutual overlaps. Under the SDL, value is co-created by actors who integrate their resources to be mutually better off and improve the service ecosystem's well-being (Vargo & Lusch, 2004, 2008). Thus, it can be argued that under SDL, well-being stems from a successful value co-creation. Vargo and Lusch (2006, p. 43) argue that *“in order to improve their individual and collective well-being, humans exchange the service – the application of specialized skills and knowledge – that they can provide to others for the service that they need from others.”* Like SDL, the TSR focuses on the stimulation of increasing well-being between actors in an interaction (Anderson et al., 2013). Simultaneously, an increase in one actor's well-being can negatively impact and, thus, decrease another actor's well-being (Rosenbaum et al., 2011). All in all, both frameworks address the importance of positively-valenced interactional relationships between actors in a service ecosystem – with the difference that the SDL understands the outcome of such relationships to be value co-creation. In contrast, the TSR sees increasing well-being as a result of these interactional relationships.

## 2.2.2 Synthesizing Competing Perspectives

In their call for the two frameworks' integrative application, Kuppelwieser and Finsterwalder (2016) neither elaborate nor outline how such theoretical synthesis ought to be executed. Therefore, this paper advances a theoretical framework synthesis that adopts the logic and premises of both TSR and SDL. However, to allow for a rigorous analytical process, this paper further utilizes research frameworks and conceptualization from the areas of customer experience (Gentile et al., 2007; Lemon & Verhoef, 2016), value processes (Laud et al., 2019; Plé, 2016), service ecosystems (Frow et al., 2019; Sawyer, 2005; Taillard et al., 2016) and well-being (Leo et al., 2019). Ultimately, in merging the complementing theoretical frameworks, this paper seeks to propound an integrative framework for a simultaneous application. This will not only answer the call by Kuppelwieser and Finsterwalder (2016) but also make it attainable to meticulously analyze the value processes, as defined by the research question, and their subsequent impact on a service ecosystem's well-being.

Gentile et al.'s (2007) framework is applied to this paper to shed light on the concept of customer experience and its impact on the perception of value propositions, and consequently its impact on well-being. Simultaneously, Lemon and Verhoef's (2016) typology will be utilized to expound the complex nature of customer experience by elaborating on the touch points that actors may come across and engage with.

To understand the value processes that the actors participate in, this paper employs Plé's (2016) typology of resources which will allow for a profound understanding of which resources are integrated and misintegrated. Complimentary to this, Laud et al.'s (2019) framework of resource misintegration will be utilized to clarify the impact that resource misintegration may have on value processes.

Additionally, to comprehend the service ecosystems in which actors co-create and co-destroy value through resource integration and misintegration, respectively, this paper brings forward the conceptualizations of Sawyer (2005) and Taillard et al. (2016), which shed light on how the service ecosystem emerges and remains viable. Synchronously, Frow et al.'s (2019) framework expands on the external influences which influence the service ecosystem's actors.

Finally, to understand the impact that the value processes within the service ecosystem have on collective well-being, the framework by Leo et al. (2019) is used to describe where stimulated and hindered through the actors' actions and interactions.



## 3. Methodology

The following chapter outlines the research philosophies underpinning the study, as well as the research methods. The data collection strategy is elaborated on, as well as the method of data analysis. The shortcomings of the chosen method are discussed and lastly, the trustworthiness of the research is established.

### 3.1 Research Philosophies

Every empirical undertaking must begin with establishing the researchers' implicit understanding of the world and how the unit of analysis ought to be studied (Daymon & Holloway, 2011). Thus, the following paragraphs will establish the research paradigms adopted in this paper, focusing on ontology and epistemology.

#### 3.1.1 Ontological Considerations

Ontology is concerned with the understanding of the nature of social entities and what constitutes reality for these entities (Bryman & Bell, 2011). In other words, ontology is defined as *"the study of being and involves ideas related to human existence, the nature of being and social reality"* (Daymon & Holloway, 2011, p. 100). This paper takes on the **social constructionist** perspective which *"asserts that social phenomena and their meanings are continually being accomplished by social actors"* (Bryman & Bell, 2011, p. 22). Thus, it is argued that there is no single reality that enables or constrains the social actors. Quite the contrary, social constructionism argues that reality is a fluid concept that is context-dependent and is, as such, consistently renegotiated by the actors. However, at the same time, individuals can share a social reality through interaction and reaffirmation of their shared views. In sharing a reality, individuals create and maintain a version of their social reality which allows for a mutual understanding and shared knowledge. Andrews (2012) prewarns that social constructionism has been repeatedly criticized for accepting any subjective reality as credible and truthful, and, thus, disregarding the importance of objective reality. Nonetheless, social constructionists create an objective reality that is relevant and bound to their social reality through mutual interactions (Andrews, 2012).

Nonetheless, this paper acknowledges that there is no definite truth and that knowledge is indeterminate in its nature (Bryman & Bell, 2011). Consequently, this research does not seek to describe any generalizable truth as the knowledge presented in the forthcoming paragraphs is profoundly influenced by the authors' social constructions. Thus, this research and its

conclusions present a specific version of a social reality that is constructed and reconstructed by the active role of the individual (Bryman & Bell, 2011; Järvensivu & Törnroos, 2010).

### 3.1.2 Epistemological Considerations

Epistemology is defined as *“the study of being and involves the ideas related to human existence, the nature of being and social reality”* (Daymon & Holloway, 2011, p. 100). Thus, the overall focus of epistemological considerations is to understand what knowledge is and how knowledge is created (Daymon & Holloway, 2011).

This paper adopts the epistemological paradigm of *interpretivism* in line with the notion of social constructionism (Daymon & Holloway, 2011). It is argued that interpretivists believe *“in the existence of multiple realities and truths which are open to change because the social world, not having a separate existence from the individual, is socially constructed”* (Daymon & Holloway, 2011, p. 102). By applying interpretivism, the researchers and the individuals participating in the empirical data collection construct a social reality together. Thus, the research focus is always aimed at the individual and the studied phenomenon (Daymon & Holloway, 2011). Ultimately, the goal of interpretivist research is to seek understanding instead of a scientific explanation. Interpretivist research acknowledges that researchers are biased as they make inferences from and about the data they collect. Hence, researchers are prone to construct their social reality (Daymon & Holloway, 2011).

## 3.2 Research Approach

Researchers disagree about the most appropriate approach to knowledge in pursuit of generating new knowledge (Bryman & Bell, 2011). As a generally accepted research dichotomy, on the one hand, it is possible to use a pre-existing theory and test it against a formulated hypothesis - *deduction*. On the other hand, researchers begin with observing and data collecting, which prompts new theories - *induction*. Daymon and Holloway (2011) argue that research applying the ontology of social constructionism and subscribing to the epistemology of interpretivism should follow an inductive research process. Nonetheless, such a simplistic polarization is not appropriate as both inductive and deductive research have fluid boundaries and include aspects of each other (Bryman & Bell, 2011). To that end, it is proposed to seize with seeing deductive and inductive research as definite distinctions and instead to understand them as tendencies (Bryman & Bell, 2011).

Thus, to overcome the dichotomic relationship between inductive and deductive research, this paper applies the *abductive research approach* (Dubois & Gadde, 2002). It is argued that

*abduction* does not follow any pre-planned phases of research followed in chronological order. Quite the contrary, Dubois and Gadde (2002, p. 555) posit that “*by constantly going ‘back and forth’ from one type of research activity to another and between empirical observations and theory, [the researcher] is able to expand his understanding of both theory and empirical phenomena.*” In other words, abduction applies what Dubois and Gadde (2002, p. 556) call *systemic combining* that is defined as “*a nonlinear, path-dependent process of combining efforts with the ultimate objective of matching theory and reality.*” Hence, this paper uses preconceived theoretical notions as a foundation that informs the empirical sections. The collected, analyzed, and discussed data is then used retrospectively to reiterate and refine the theoretical foundations (Dubois & Gadde, 2002).

However, applying abduction as the overall research approach does not exclude using deductive and inductive elements throughout the research process (Järvensivu & Törnroos, 2010). Hence, abductive research must be considered the middle ground between deduction and induction and can lean towards either one in the process (Dubois & Gadde, 2002).

### 3.3 Research Strategy & Purpose

Formerly, researchers selected their research strategy based on their epistemological decisions - positivist researchers shall apply quantitative methods and interpretivist researchers qualitative methods (Daymon & Holloway, 2011). However, it is argued that qualitative methods may also be multi-paradigmatic and, hence, be applied in either positivist or interpretivist research (Denzin & Lincoln, 2005). As this paper applies the abductive research approach (Dubois & Gadde, 2002), it is deemed compatible to apply **qualitative research methodology**. The value of qualitative research is its profound commitment to engage with and understand individuals in their social reality (Daymon & Holloway, 2011). What is more, qualitative research allows for a close engagement and interaction with the individuals, their respective perspectives, and accounts of experiences within their social context. Concurringly, qualitative research is argued to be profoundly aware of the contextual impact on the individuals who provide data. Thereby, qualitative research accounts for the social context to be bound and not absolute (Daymon & Holloway, 2011).

As the purpose of this paper is to analyze how the utilization of actors' resources in value processes impacts well-being in a service ecosystem, and the research is bound to the Copenhagen Metro network, this paper seeks to explore a specific phenomenon. Thus, a **case study strategy** is applied as the designated research method. Yin (2018, p.15) defines a case study as “*an empirical inquiry that investigates a contemporary phenomenon in depth and within its real-world context, especially when the boundaries between phenomenon and*

*context may not be clearly evident.*” In other words, case study research focuses on cases in which the context significantly impacts the studied phenomenon and data (Yin, 2018). Concurringly, it is argued that *“the interaction between a phenomenon and its context is best understood through in-depth case studies”* (Dubois & Gadde, 2002, p. 554).

Moreover, Yin (2018) offers three guiding conditions for using a case study in empirical research. Firstly, it is argued that applying case studies in social research is particularly advisable if the research focuses on understanding a current phenomenon and the research question poses an inquiry into how the phenomenon works by using the adverbs “how” or “why.” As the research question that guides this research paper uses the adverb “how,” the first condition is satisfied. Secondly, this paper focuses on a phenomenon over which the researchers do not have any behavioral control (Yin, 2018). The source of evidence involves direct accounts of experiences made by the individuals within their social reality and the context of the Copenhagen Metro. Thus, the studied phenomenon cannot be manipulated. Lastly, case studies are particularly relevant to research that studies a contemporary case and can, hence, rely on first-hand accounts as compared to historical data. However, that is not to argue that case studies do not rely on second-hand, e.g., online publications and surveys. On the contrary, this type of data triangulation is used to increase a case study’s rigor (Yin, 2018).

At the same time, Yin (2018) distinguishes between three types of case studies - explanatory, descriptive, and exploratory. The goal of this research is to investigate the experiences of the riders with the Metro in Copenhagen. In doing so, a theoretical framework has been developed based on research on value processes, customer experience, well-being, and service ecosystems. However, the proposed theoretical framework has not been empirically verified thus far. Thus, this case study will be **exploratory** as its data and results may be used to develop further studies in the future. While the exploratory element of this paper is predominant, it ought to be acknowledged that the conducted case study will also be partially **descriptive**. Yin (2018, Glossary section) postulates that a descriptive case study aims to *“describe a phenomenon in its real-world context.”*

### 3.4 Data Collection

In order to answer a research question, different sources of data must be gathered and empirically analyzed. Thus, the following section outlines this paper’s data collection approach.

### **3.4.1 Primary Data**

Primary data is generated from an original source (Collis & Hussey, 2013) and is essential in answering the research question. This exploratory case study is concerned with how individuals subjectively experience value processes related to the Metro Company, and in line with the qualitative research strategy, it was deemed optimal to gather primary data by conducting individual interviews with actors who identify as Copenhagen Metro riders. Under the interpretivist paradigm, interviews are concerned with the attitudes and feelings of selected individuals (Collis & Hussey, 2013) and, thus, allow for a deeper understanding of the individual's experience.

In line with the exploratory nature of this research, semi-structured interviews with open-ended questions were found to be the most appropriate data collection approach. Kallio et al. (2016) argue that semi-structured interviews are beneficial when studying people's perceptions as the setup allows for a more profound and subjective discussion of the specific person's views. Consequently, the interviewees were able to express thoughts that were important to them, which ultimately led to diverse perceptions being expressed.

Through this approach, the main topic of the interview was set by the researchers. However, the interviewees were encouraged to elaborate on related topics they deemed important (Collis & Hussey, 2013). Thus, the open-ended questions stimulated longer and more developed answers, which generated valuable data. The questions were not given to the interviewees ahead of the interview, as the researchers aimed to obtain answers that were not pre-planned. By this, it was reasoned that the answers were more likely to represent the authentic experience of the interviewee, instead of answers being consciously or subconsciously adapted to fulfill what the interviewee assumed the researchers would want to hear.

### **3.4.2 Interview Guide Construction**

The quality of the questions asked directly impacts the results and the trustworthiness of the study (Kallio et al., 2016). Thus, before constructing the interview guide, a thorough literature review was carried out, leading to the theoretical framework. This resulted in the researchers obtaining relevant knowledge about the concepts in focus, which allowed for developing questions that were more likely to result in fruitful discussions.

The interview guide served as a guide in the dialogues with the interviewees and was constructed accordingly. Subsequently, substantial effort was put into developing an interview guide that would allow the interviewees to freely share their thoughts and opinions in areas of

interest to the researchers. Each interview started with a friendly conversation where the interviewee was informed about the study's purpose, and they were encouraged to bring up any concerns about the process. Whereas there was no hierarchy in regards to the importance of questions, the first questions nudged towards the interviewees' experiences with the Metro.

The following questions were constructed with the research question more in mind. The concepts discussed in the theoretical framework lead to understanding the processes, behaviors, and actions of different actors and their consequent effect on different forms of well-being on different levels. Ultimately, the well-being domains by Leo et al. (2019) were used as a basis to construct questions that would refer to different types of well-being. However, concepts such as 'well-being' and 'value' can be argued as uncommon and unnatural topics to discuss. Thus, in order to create a space where interviewees could talk about these concepts in indirect terms, the questions were developed in a way so that they would encourage the participant to share their experiences. Through this approach, it was expected that the interviewee would touch upon topics that relate to their well-being without specifically introducing the term. Lastly, a small number of relevant questions regarding the interviewee's demographics were constructed. These were included to provide additional information about the interviewee, such as their location and occupation. The full interview guide can be found in *Appendix 1*.

### **3.4.3 Selection Process for Primary Data Sources**

In line with the qualitative nature of this paper, a sample of the population was selected to be interviewed in order to collect the primary data. However, per the interpretivism paradigm, the primary data was not statistically analyzed and, thus, the sample needed not to be random (Collis & Hussey, 2013). Instead, the focus was put on identifying individuals with experience with the Metro Company and, thus, purposive sampling was chosen as the optimal approach. This consequently allowed the researchers to approach individuals deemed likely to provide valuable insights into the topic being explored, which is argued beneficial when carrying out a case study (Saunders et al., 2009). However, convenience sampling was also used as a complementary method in the sense that the researchers made use of their immediate network to find individuals who could share their experiences. Furthermore, age and gender were not considered in the selection of interviewees, as these criteria were argued unimportant in this study. After identifying a number of possible interviewees through purposive sampling, these were further reduced based on their availability.

The researchers set out to interview between five to ten individuals and ultimately interviewed nine. To allow for various experiences to be represented and shared, the focus was put on

contacting individuals who were deemed likely to have different experiences with the Metro. This included commuters, tourists, people who recently moved to the Copenhagen area, and infrequent users. As this study took place during a nationwide lock-down, all interviews were held over Microsoft Teams. All interviews were recorded, and both researchers were present during all interviews. The interviews were conducted in English.

#### **3.4.4 Secondary Data**

To meet the objectives of this paper, the primary data was further complemented with secondary data, which is defined as pre-existing data (Collis & Hussey, 2013). In order to create a valid foundation for analysis, several different sources of data were, thus, included in the data collection. The main source of secondary data for this paper was the existing literature on the key topics derived from peer-reviewed journals. This data was gathered using the EBSCO Host database, as well as Google Scholar, and keywords such as service, service-dominant logic, value co-creation, value co-destruction, resource integration, and well-being were used to find the most relevant material. To ensure reliability and credibility of the paper, emphasis was put on the articles' publication date and the respective journal to make sure the most relevant findings in the research area were included. Furthermore, existing news articles regarding the Metro and information on the webpage of the Metro Company were used. The publication language of all secondary data sources was limited to English and Danish.

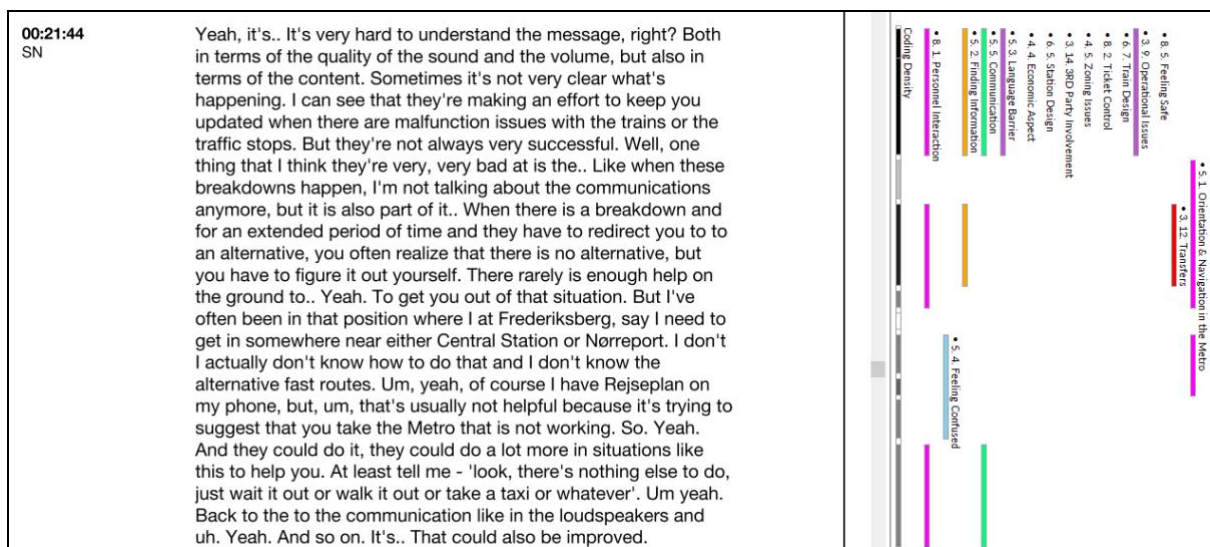
### **3.5 Data Analysis**

After completing the data collection process, the analytical stage commenced focusing on making sense of the amassed data. As such, the data analysis processed both primary and secondary data. In line with the premises of qualitative research, an ongoing process of modifying the semi-structured interviews took place throughout the empirical collection stage to correspond with the compiled accounts (Daymon & Holloway, 2011). Thus, the analytical process occurred in tandem with the data collection process.

Firstly, the collected data was assembled and subsequently transcribed. The conducted interviews have been automatically transcribed using the Konch audio-file transcription cloud-based software. Simultaneously, the researchers reviewed the correctness of the transcript with the original audio recording. Furthermore, the transcript was reviewed to ensure that the text file accounts for possible intonation and facial expressions recorded by the researchers during the interview (Daymon & Holloway, 2011).

Secondly, the transcribed data was inserted into NVivo (ver. 1.4) for computer-assisted qualitative analysis. The researchers, consequently, codified the primary data using NVivo to make sense of the gathered data. Coding was used to break down, label the data, and seek patterns in the data set that is ultimately considered relevant to this paper's overall purpose (Daymon & Holloway, 2011). Following Saldaña's (2016) dual-stage coding process, the research began with the first cycle coding. This cycle's outcomes were patterns of themes found across the data set. An example of the coding process as documented through NVivo can be seen in *Figure 6*, which shows an excerpt from the interview with SN, and where the coding stripes to the right showcase the coding density and richness of the collected data. In addition, it ought to be acknowledged that the theming process is reiterative. Thus, the researchers kept reviewing the already identified themes.

Subsequently, the second cycle coding process organized the formerly assigned themes into overarching categories. Such categories resulted from the shared pattern of the themes identified in the first cycle (Saldaña, 2016). Hence, the categorical organization was ultimately used to further group the data for analytical purposes.



*Figure 6 - Data Coding Process in NVivo.*

Following the coding process, the data analysis took place to ascribe meaning to the collected data and other case evidence (Daymon & Holloway, 2011). Hence, to establish connections and interdependencies, the researchers interpreted and transcended the coded data. The in-depth qualitative analysis was used in later stages to mirror the findings with established theory, to test the theoretical framework put forward in this paper, and, in turn, to provide a conclusion on the overall research question.



### 3.6 Method Criticism

The findings of the paper are a direct result of the methods chosen to approach the research questions. Thus, it is of importance to understand the limitations and shortcomings of the chosen methods and their consequent effect on the study. Utilizing case studies in academic research was not always an acknowledged method (Dubois & Gadde, 2002). However, over time, the method has been further developed and adjusted to become a widely accepted method of scientific research. Nonetheless, even though the case study strategy provides a compelling perspective for answering the research question, its limitations must be acknowledged (Yin, 2018).

Case studies have consistently been criticized for being executed with an insufficient degree of rigor (Yin, 2018). Such a lack of rigor is frequently caused by not following any systematic procedures or focusing on ambiguous evidence, which is then assigned high importance yet is not supported by the data. In order to counter this pitfall, this study applies the abductive research strategy which allows the researchers to alternate between empirical data and theory and, thus, to maintain the research course. It is argued that the increased reliance on theory, as postulated by the abductive research approach, serves as a countermeasure to ensure sufficient rigor (Dubois & Gadde, 2002). At the same time, it ought to be acknowledged that the interpretivist paradigm is prone to researcher biases. The researchers' own social reality has an impact on the understanding and interpretation of the collected data.

Thus, further criticism of case studies is their ability to provide generalizable data (Yin, 2018). It is claimed that compared to other research strategies, a case study lacks generalizability. However, the goal of this case study is not to provide statistical generalizations pertaining to varying sample groups or populations. On the contrary, this research paper aims to stimulate the creation, expansion, and development of the applied theories by reaching deeper insights into the phenomenon and its context (Järvensivu & Törnroos, 2010; Yin, 2018). Thus, this single case study shall propel further applications of the theoretical framework put forward in this paper.

Lastly, the data collection method also impacts the paper. By conducting interviews, the interviewer can both consciously and unconsciously impact the interviewee and their answers. The semi-structured nature also opens up the possibility for interviewees to wander off, thereby making the results difficult to analyze. What is more, interviewing requires a significant amount of time, leading to the sample size being small. This consequently limits the amount of data that can be collected and ultimately analyzed (Adams, 2015).

### 3.7 Trustworthiness of Research

Qualitative research has been prone to receive critique from quantitative researchers and has been founded on a belief that due to the non-generalizable nature of qualitative research, its findings cannot be reliable (Shenton, 2004). However, Lincoln and Guba (1985) early on suggested four criteria that qualitative researchers can strive towards to ensure research quality within studies; *credibility*, *transferability*, *dependability*, and *confirmability*. These criteria have since become a generally accepted way in which qualitative researchers make sure of a high level of trustworthiness of their research (Collis & Hussey, 2013; Shenton, 2004).

*Credibility* refers to how congruent the findings are with reality and is concerned with the 'truth' of the findings (Shenton, 2004). This study established credibility by ensuring that interviews took place on a voluntary basis where a prolonged time was spent with each participant to build a rapport. By creating a space where participants felt comfortable to share their thoughts freely, it is argued that the data is a true reflection of the participants' experiences. Credibility was also ensured through triangulation. Triangulation of the theory was achieved by using multiple theoretical perspectives from various fields when interpreting the data. In contrast, triangulation of the collected data was ensured by using multiple data sources, which more than one researcher reviewed several times over a period of time (Lincoln & Guba, 1986).

*Transferability* relates to what extent the findings can be applied in another context, thus enabling generalization (Collis & Hussey, 2013). As per the qualitative and exploratory nature of this research, the aim was not to generalize the findings, but rather get a deeper understanding which could help develop the existing theory in a field where research is scarce. However, as there is also a descriptive aim in the paper, it can be argued that studies where a similar context can be identified, may to some extent, find the findings of this paper transferable (Lincoln & Gude, 1986). By clearly disclosing the boundaries of the setting in which this study took place, it is argued that sufficient contextual information has been provided.

*Dependability* focuses on whether the research process is well-documented and rigorous (Collis & Hussey, 2013). Here, it has been ensured by continuously, systematically, and accurately documenting the research process and, more specifically, the specificities regarding the data collection of primary data and the subsequent coding of said data. By providing an exhaustive presentation of the methodology section, future researchers can understand the underlying assumptions and methods used in this paper.

Lastly, *confirmability* relates “*the researcher’s ability to demonstrate that the data represent the participants’ responses and not the researcher’s biases or viewpoints*” (Cope, 2014, p. 89). The nature of this paper is affected by the subjective experiences of individuals which is interpreted through the biases of the researchers. Nevertheless, this paper ensures confirmability by disclosing all data gathered in its raw form, and by acknowledging through the method critique that the biases of the researchers have influenced the paper to some extent. Through the rigorous data coding and the several steps it includes, the interpretations of the researchers’ beliefs were also clearly displayed, thereby made available for audit.

## 4. The Copenhagen Metro Case

In the following paragraphs, the case of Copenhagen Metro is introduced. Thus, this section establishes the foundation of this case study and sheds light on the case interactions that are of empirical interest.

### 4.1 Constructing a Metro Network

To keep up with the estimated population growth of Copenhagen and its surrounding municipalities, the Danish parliament passed the Ørestad Act in 1992 that established a light rail connection should be built to the new residential area – Ørestad (COWI, 2021; Metro, 2021a). Later on, it was decided that a metro system should be constructed and, hence, the construction work commenced in 1996.

The newly established metro began its operations in October 2002. However, the first line – M1 – was finished first in May 2003. Four and a half years later, in late 2007, Copenhagen Airport became connected with the city center by the metro – M2. In the meantime, the Danish Government and the municipalities of Copenhagen and Frederiksberg had decided that another metro line was to be built to cover the inner city – M3/M4 Cityringen (The City Circle Line). The City Circle Line, however, consists of two lines that partially share the same route. The M3 and M4 lines opened for first passengers in 2019 and 2020, respectively. COWI (2021) claims that the construction of M3 and M4 was the most significant project Copenhagen had seen in over 400 years. The M4 Line is currently being expanded southwards to serve the Sydhavn residential area and is planned to be finished in 2024 (Østergaard, 2015).

### 4.2 Current Metro Network

As of 2021, the Metro network in Copenhagen consists of 4 lines that span the city with 42 kilometers of rails (Metro, 2021b), cf. *Figure 7*. With the opening of the M3 City Circle Line, it was assumed that the number of rides would significantly increase. However, the global outbreak of the coronavirus impacted the Metro's operation. Therefore, in 2020, all four metro lines served 63.7 million rides which are comparable with the number of passages in 2018 – prior to the opening of the City Circle Line (Metro, 2021c).

All Copenhagen metro lines are fully automatic and operate 24/7 without a set schedule (Metro, 2021d). Nonetheless, in rush hours, trains arrive at a frequency between two and four minutes (Metro, 2021e).

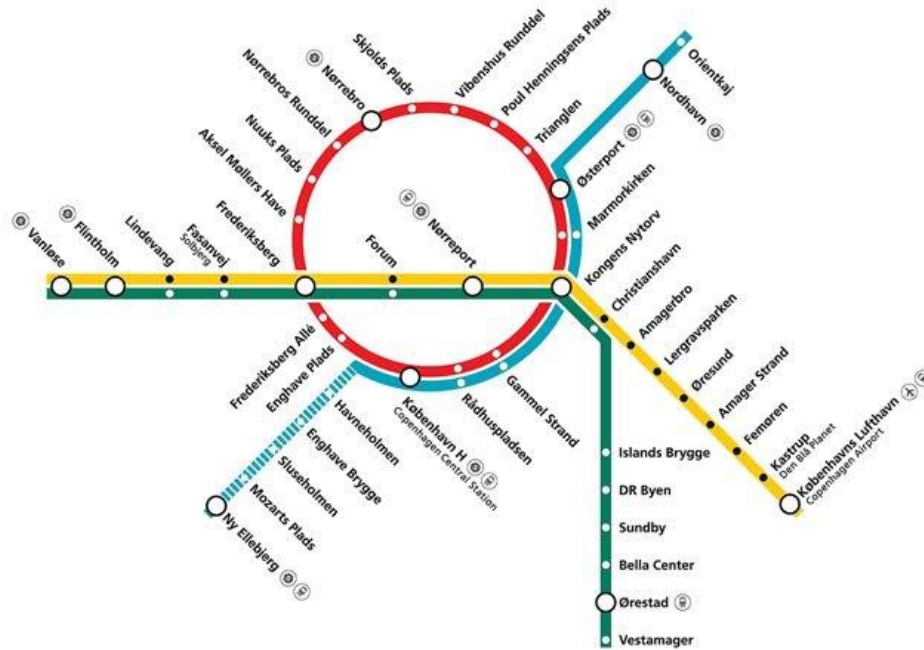


Figure 7 – The Copenhagen Metro Network as of 2021, Visit Denmark (2019).

#### 4.2.1 Company Structure & Operations

The Metro is owned and operated by Metroselskabet I/S (The Metro Company). The Metro Company is a legal partnership between the Danish State, Copenhagen Municipality, and Frederiksberg Municipality. In terms of ownership, the State owns 41,7% of the Metro Company, Copenhagen Municipality owns 50%, and Frederiksberg municipality owns 8,3% (Metro, 2021f).

However, the daily operations of the Metro’s four lines are the responsibility of Metro Service A/S, a private provider selected through a tender (Metro, 2021g). The company is responsible for the Metro’s on-time performance, safety at the stations, ticket control, customer service, and asset maintenance (Metro, 2021g).

#### 4.3 Establishing Case Focus

Taking into consideration the nearly 64 million rides taken by passengers on the Metro in 2020, the core case focus ought to be established to delineate the research area. As per the overall research question, this case study sets out to analyze the utilization of the actors’ resources in value processes and its impact on well-being within an ecosystem. Thus, to conduct a focused case study, one ought to scrutinize the service ecosystem, which is to be empirically analyzed. In order to thoroughly describe the given service ecosystem’s nature, this paper

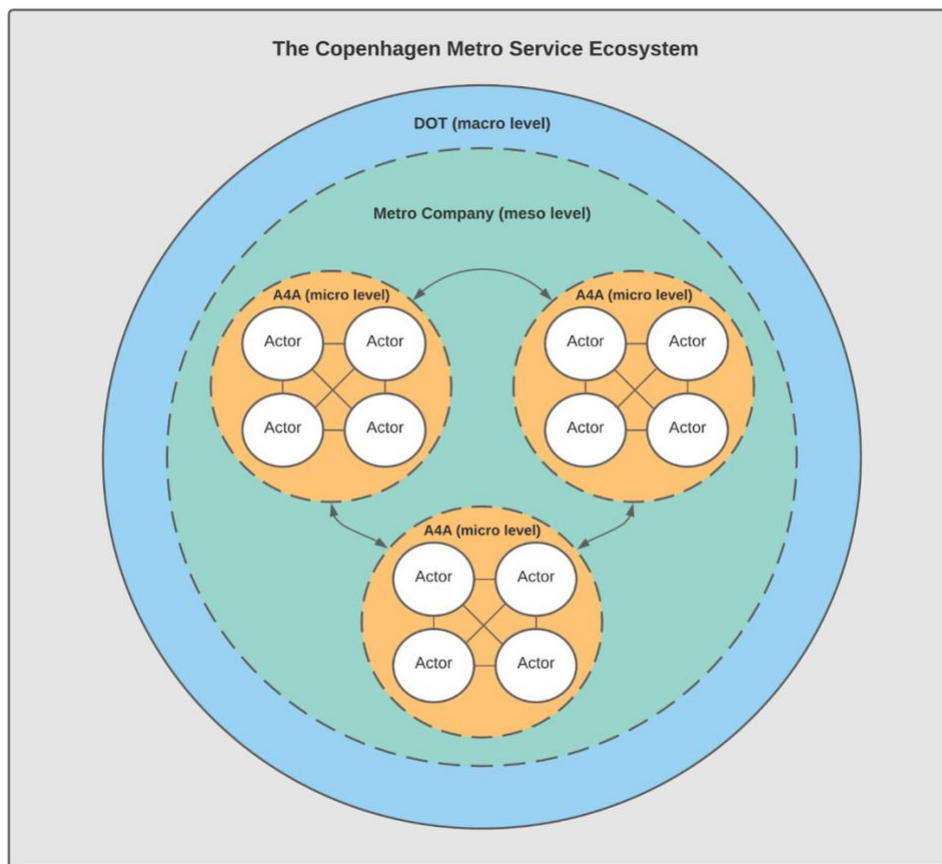
utilizes the service ecosystem conceptualization of Frow et al. (2019), cf. 2.1.4.1. Conceptualizing Service Ecosystems beyond the SDL. Hence, the Metro service ecosystem can be described in detail and consequently visualized with its levels of aggregation.

In line with the definition postulated by Vargo and Lusch (2016), this paper views a service ecosystem as a self-adjusting and self-contained system of resource-integrating actors engaging in mutually beneficial interactions with the goal of co-creating value. Consequently, the service ecosystem, as existent in the Copenhagen Metro, is argued to be highly fluid and ever-changing in terms of the actor networks it consists of. This is reasoned with the fact that an actor, e.g., a rider, needs to take the Metro and, hence, becomes part of the direct service ecosystem as nested in the Metro. However, upon the rider's exit from the Metro's trains and station, the actor disengages from the service ecosystem. Subsequently, the fluid and self-adjusting nature of the Metro's service ecosystem becomes apparent and, thus, the actors who participate in the service exchange are constantly changing.

The Copenhagen Metro service ecosystem consists of three levels of aggregation - micro, meso, and macro levels (Van Heuvelen, 2018). The micro level of the service ecosystem consists of the dyadic actor-for-actor exchanges that occur within a particular service system, i.e., a systemic subunit to the service ecosystem (Frow et al., 2019; Polese et al., 2017). Hence, it is the interactions between and among the individual actors, such as riders, ticket controllers, platform staff, etc., that are situated on the micro level. Additionally, the meso level poses the middle level where the individual interactions are surpassed, and the focus is on the interactions that all the actors have with the Metro Company and the Metro network when using the Company's service. Frow et al. (2019) argue that although frequently omitted by researchers, the meso level poses an exciting research context that influences and is influenced by the micro and macro levels of the service ecosystem.

Furthermore, as the goal of this research to establish the impact that the utilization of resources in value processes has on ecosystem well-being, Frow et al. (2019) argue that it is particularly on the meso level where well-being can be studied and the micro/macro influences observed. Finally, the macro level within the Metro service ecosystem can be described in terms of the broader public transportation context where the Metro is part of the umbrella organization DOT (Din Offentlige Transport) which unites all public transportation providers in Copenhagen, e.g., Movia and DSB. However, Wieland et al. (2016) prewarn that one must not resort to separating the levels of aggregation from each other as they mutually impact each other. Thus, arguing a sole focus on the meso level would be contradictory to Wieland et al.'s (2016) argumentation. To account for this, this research paper takes on a holistic point of view where the whole service ecosystem, as described above, is of empirical interest. Leo

et al. (2019) concur with Wieland et al. (2016) and argue that well-being does not solely reside on the meso level. Instead, the framework of service ecosystem well-being domains (Leo et al., 2019), cf. 2.2.1.2. Service Ecosystem Well-being, posits that different forms of well-being can be observed across the three levels of aggregation and these forms mutually affect each other. However, as the whole service ecosystem is highly fluid and may consist of potentially up to millions of actors, this paper does not seek to explicate any generalizable conclusions valid for the entire Copenhagen Metro service ecosystem. The Copenhagen Metro service ecosystem, as defined in the preceding paragraphs, is visually depicted in *Figure 8* and will guide the empirical portion of this research.



*Figure 8 - The Copenhagen Metro Service Ecosystem, own creation.*

## 5. Findings

Following the collection and organization of empirical data, this section provides an analytical account of the findings made. In doing so, the findings support the overall aim of addressing the research question - *how does the utilization of actors' resources in value processes impact the well-being within a service ecosystem?*

It ought to be acknowledged that the subsequent findings do not present the collected primary data in its entirety and, thus, only exemplary sequences are showcased in the upcoming argumentation and paragraphs. To ensure ongoing confidentiality that was promised to the interviewees, the exemplary sequences extracted from the interviews will be marked with the interviewee's two letter initials. Each interviewee gave consent to be recorded and for their statements to be used. The complete transcriptions are located in the Appendix, as *Appendix 2*, and the full overview of applied codes and categories can be found as *Appendix 3*.

### 5.1 Rider Profile

To understand the value processes which actors engage in to stimulate well-being, it was of key importance to understand the individual profiles behind every interviewee, i.e., rider. Thus, the following section sheds light on the ridership profiles and serves as the foundation for appreciating the individual accounts. An overview of the conducted interviews and the interviewees' rider profiles can be found in *Table 6*.

#### 5.1.1 Residence

The individuals who partook in this research all have prior first-hand experiences with the Copenhagen Metro. However, not all interviewees are native to Denmark, some visit Copenhagen sporadically, and some recently moved away. Among the nine interviewees, six of them permanently reside in Copenhagen, Denmark, and three live in Sweden. Those who live in Sweden are represented by an interviewee living in Malmö and one respectively in Lund and Stockholm.

#### 5.1.2 Occupation

In order to fully grasp the individual accounts, the interviewees represented a diverse group of persons with various professional backgrounds. The profiles consist of interviewees who work on a full-time basis and also those who are unemployed, undergo an internship, or study at a university.



### 5.1.3 Frequency of Riding the Metro

The interviewees were asked about their riding behavior in connection to the Copenhagen Metro. The interviewees indicated varying ridership patterns in which the frequency of taking the Metro shifts and is dependent on external circumstances. The interviewed riders expressed that their needs of riding the Metro evolve, not only due to the outbreak of the coronavirus but also due to moving around Copenhagen.

The variance in the interviewees' riding frequency allows the researchers to comprehend the interviewees' self-observed behavior and allows for a rich data set with profiles whose usage of the Copenhagen metro differs. To a certain extent, it is assumed that the interviewees are impacted by the coronavirus outbreak and, hence, their rider profile has been altered and the interviewees' accounts are historic and to some extent based on their recollection.

*“Uh, yeah. So I don't really leave Ørestad due to the pandemic. But in a normal month, (...) it would be, like five to eight round trips a week.” – JR*

Initials	Residence	Occupation	Rider Profile	Interview Conducted	Length
IL	Lund, SE	Student	Occasional - returning visitor to CPH	Online	27 min
NP	Copenhagen, DK	Student	Occasional	Online	40 min
VG	Copenhagen, DK	Industrial Designer, Student	Occasional	Online	37 min
JR	Copenhagen, DK	Digital Marketing Manager	Commuter, impacted by COVID	Online	32 min
EG	Copenhagen, DK	Office Worker	Former commuter, now occasional	Online	31 min
SN	Malmö, SE	Administrative Officer	Commuter, impacted by COVID	Online	40 min
EJ	Stockholm, SE	Digital Marketer	Former commuter	Online	22 min
BK	Copenhagen, DK	Strategic Designer, Student	Occasional	Online	26 min
ND	Copenhagen, DK	Student	Occasional	Online	31 min

*Table 6 - Overview of Research Participants & Individual Profiles*

## 5.2 Attitudes Towards Public Transportation

The interviewees were asked during the dialog to elaborate on their general attitudes towards public transportation in Copenhagen. Therefore, this category provides a holistic account of the interviewees' nuanced positions which were exemplified through comparing their experiences with other metro and public transportation systems from around the world.

### 5.2.1 Means of Transportation

In their respective accounts, the interviewees broadly described a varied use of the public transportation system in Copenhagen alongside using other private means of transportation such as biking or driving a car. It can be argued that the interviewees make a decision on an ongoing basis whether or not to take public transportation, i.e., bus, train, or Metro, based on the distance between their origin and destination.

*"Well, the short answer is it depends. If it is too far away, in my opinion, and I would definitely take some public transport. (...) If the distance is shorter, within three kilometers, maybe I would definitely bike." – NP*

Interviewee VG described their experience with public transportation as such of guilt. VG claims that there is a social pressure present on not taking public transportation and, thus, favoring biking around Copenhagen.

*"So being here, sometimes I do feel, and I kind of have this guilt when you kind of talk to Danes that you use the Metro. (...) It's like using the Metro is kind of like a guilt trip for people. It's just like – 'Oh, you're being lazy and you're not moving' - you know?" – VG*

VG expanded on their argument by establishing a feeling of social pressure from their peers. Hence, peers play an apparent role in how they exercise social pressure on others.

### 5.2.2 Reasons for Taking Public Transportation

The interviewees expressed a combination of several means of transportation which makes their journey more practical and faster. To exemplify this argument, interviewee BK said that by combining public transportation with biking, they could transport themselves faster around Copenhagen. Similarly, interviewee SN, as an experienced user of the Copenhagen public transportation system, knows what combination of the available means of transportation need to be taken by them in order to get to their destination. Thus, it is argued that some interviewees take public transportation from a strictly functional standpoint which is the sole motivation for taking it in the first place.

*“I think it's for me, it's just the thing that will hopefully take me from A to B without a lot of hassle. And then I think that's the most important thing for me as commuter.” – SN*

*“I often take public transportation as just from a very functional perspective. I don't really engage in the space.” – BK*

### **5.2.3 Reasons for Taking the Metro**

There is an independent consensus among interviewees ND, BK, and VG that the current weather situation could act as reasoning for taking the Metro. As neither one of these interviewees is a commuter, their use of the Metro is rather incidental. Nonetheless, they agree with each other that in case of bad weather, they would be more prone to taking the Metro as opposed to other instances in which they would bike.

Unlike others, interviewees EJ, JR, EG, and SN are current and former commuters who would take the Metro to and from work. Thus, it can be argued that the Copenhagen Metro became part of their daily routine. Yet, interviewee SN expressed that having a hassle-free journey is crucial and, thus, being asked to switch from the train to the Metro was necessary on occasion due to railway maintenance work. In such case, SN articulates their experience.

*“It could be the train doesn't go any further because they do that a lot, sometimes there's disturbances in the traffic and then yeah, you have no other option than to take the metro from the airport.” – SN*

Lastly, interviewee NP declared that they prefer taking the Metro over other means of public transportation due to it offering a better experience. This experience is constituted by an increased feeling of safety that NP perceives as the Metro stations are newer and built in a way protecting them by glass barriers from the trains that are entering and leaving the station.

*“It feels more safe and feels more easy to, like, handle the entire situation, I think, compared to S-train stations where sometimes you have to stand on the right side of the track, for example. That doesn't really happen in the Metro.” – NP*

NP's firsthand account is, in this instance, in contrast to interviewee IL's account in which IL expressed a dislike towards being underground and the Metro moving through a tunnel system.

### **5.2.4 Reasons for not Taking Public Transportation**

Commonly identified by interviewees ND, NP, and EJ was the impact of planned maintenance and unscheduled disturbances in the Metro's schedule on their journeys. EJ argued that the maintenance caused them to have to bike to work instead of taking the Metro, which they

identified as a distance too remote to be biking. Thus, interviewee EJ predominantly hinted at not taking public transportation in cases of external influence.

Where interviewee BK previously stated that the Metro is the fastest way of moving oneself around the city and more so if combined with biking, interviewees VG and ND stated that a reason for not taking public transportation at times, i.e., the Metro, is that it does not offer the fastest way of transporting oneself around Copenhagen. The preference articulated by VG and ND for taking the bike instead of the Metro is further pronounced in situations where the interviewees are required to make a transfer during their trip as it poses an inconvenience.

*“If my destination requires me to switch and it's within biking distance, then I'd rather not take the Metro at all and just bike there.” – ND*

Thus, it may be argued that the interviewees have an individual frame of reference, which, for them, constitutes a mental guideline for when taking public transportation is desirable or not.

### 5.2.5 Comparing Metro Systems

Even though unprompted by the researchers throughout the interviewing process, eight out of nine interviewees exemplified their accounts of experiences with the Copenhagen Metro by comparing them with other metro systems around the world. These accounts were collectively used to give weight to their arguments about the Metro in Copenhagen. Interestingly, the interviewees were overall praising the Copenhagen Metro for its operations and its design. The praise was expressed both directly and indirectly, i.e., by accounting for the downsides of the metro system being compared to Copenhagen Metro. Nonetheless, some interviewees also used examples to showcase some of the shortcomings of the Metro in Copenhagen. In the totality of their accounts, the interviewees compared the Metro to the metro systems in Hungary and Portugal (interviewee BK), the United Kingdom (interviewee EG), Sweden (interviewee EJ), Spain (interviewee IL), Japan (interviewee JR), the Netherlands (interviewee ND), France (interviewee NP), and Mexico (interviewee VG).

For example, interviewee ND drew on their experience with the metro system in The Netherlands, where they argue that the Dutch Metro is perceived as inferior to the Copenhagen Metro.

*“I'm quite biased because the metro in Holland is the sh\*ttiest thing ever. And so I find the metro in Copenhagen quite good.” – ND*

All in all, it is argued that the interviewees and their statements use their prior experiences not only from the Copenhagen Metro but utilize experiences from other cities and countries, which

ultimately influence their user and customer experience with the Metro. Thus, it becomes apparent that the role of seemingly irrelevant experiences from abroad shall not be underestimated and must be taken into consideration by the Metro Company and Metro Service in designing their service delivery.

## 5.3 Metro Usability

A topic frequently discussed in various forms by all interviewees was matters related to the usability of the Copenhagen Metro. Thus, this section elaborates on the different aspects of how the usability has impacted the interviewees' behavior and experiences.

### 5.3.1 Metro Network

On a broad level, the Metro network itself was evaluated and interviewees BK and NP pointed out that the network had improved with the recent opening of the new M3 Metro Line, also referred to as "The Circle Line." BK argued that this development increased the connectedness of the city and broadened the possibilities of using the Metro to get to one's destination. Interviewee NP further elaborated on this, arguing that the opening of the M3 enhanced their view on the older Metro lines and praised how the planners have connected the new line with the old lines. Nonetheless, when explicitly asked, interviewees EG, EJ, IL, JR, and NP agreed that the Metro generally takes you where you need to, however, it was also pointed out by EJ that in some situations one needs to complement the Metro trip with other means of transportation.

*"Uh, kind of, but then sometimes I needed to switch to a bus, so. It took me very far, but sometimes I needed to walk or take the bus the last distance." – EJ*

It was also acknowledged by JR that to reach certain residential areas, such as Vestamager, the Metro is the given transportation method. This could be assigned to the fact that this specific area was constructed in combination with the Metro network, as a way of becoming more attractive, cf. [4.1. Constructing a Metro Network](#).

### 5.3.2 Station Location & Surroundings

Elaborating on the network itself, interviewees EJ, JR, ND, and VG stated that the locations of the Metro stations are beneficial for their needs. Interviewee ND praised the network for connecting them to useful places in the city, and EJ claimed that there is always a Metro nearby in Copenhagen. Nonetheless, the stations were also evaluated in relation to their surroundings.

*“But for example, my neighborhood, the Metro itself is fine, but for example, if I go up the Metro in the neighborhoods, I live near Nørrebro station and it's not the best neighborhood, I would say. And sometimes it can make you feel quite uncomfortable. But that's not the Metro's fault. It's the people in it.” – ND*

Similar reasoning was displayed by both interviewee JR and NP in regards to the Christianshavn station. Both argued that homeless people at night around the stations contributed to a negative experience, and JR further coined the term “the Christiania crowd” to showcase their discomfort in this area, thereby establishing an impact of the external surroundings. Thus, whilst it appears from the quote of interviewee ND that one would be able to separate one’s experiences with the Metro from one's experiences with the surroundings of the Metro, the surroundings ultimately still seem to impact their overall experience from using the Metro and affect how it is used.

### **5.3.3 Convenience of Use**

An aspect that was greatly appreciated by all interviewees was the convenience of using the Metro. Nonetheless, the specificity of what exactly that was convenient varied between interviewees. Interviewee NP highlighted that it is convenient to know exactly where it will stop, and compared the experience to the confusion that can arise when using buses as these might skip stops and also stop running at some point during the night. NP also discussed the experience of using S-trains where one does not always know where to stand to access the train, and point out that this never happens with the Metro, subsequently calling it an easy situation to handle. Furthermore, interviewee JR pointed out the convenience of not being stuck in traffic when going to work. Interviewee EG, who like JR also resides in Vestamager and commuted to the central areas of Copenhagen for work, explains this.

*“But I think because I live near Vestamager, it's just really difficult to get into the city if you don't use the Metro. You know, it's a bit awkward to go... To get the train into the central station and then go on to Frederiksberg from the Central Station is just such a yeah... The Metro is most convenient thing from Vestamager to Frederiksberg.” – EG*

### **5.3.4 Bikes in Public Transportation**

However, a topic of split opinions was the discussion on bikes in public transportation. Whereas interviewee BK expressed frustration over not being able to bring the bike during rush hours and not having enough space to bring their bike and, thus, ending up awkwardly standing in the middle, interviewee JR argued oppositely when being asked what they would like to change with the Metro.

*“Then stricter, stricter enforcing of people not bringing their bikes in the rush hour. They are big, dirty and take up too much space and yeah.” – JR*

Thus, it becomes apparent that the riders have different perceptions of what purposes public transportation in Copenhagen serves. Hence, it can be argued that the riders can act in a way that is individually beneficial to themselves, however, such action may prove itself to be of an unfavorable effect on fellow riders. Worth pointing out is that interviewee BK identifies as an occasional user, whereas interviewee JR identifies as a commuter, thus, indicating that the rider profile of the individual might be a reason for this difference in approach. This contrast further represents a concern for the Metro in the sense that the desires of different riders can be directly contradicting each other, thereby illustrating the challenge of fulfilling the needs of a multitude of riders. Consequently, interviewee ND indirectly suggests a way to overcome this through adopting the approach of bikes on S-trains (the suburban train in Copenhagen) and, thereby, having specific bike stands on the Metro.

### **5.3.5 Frequency of Trains**

All interviewees praised the frequency of trains in the Copenhagen Metro as it was appreciated that one rarely needs to wait for more than a couple of minutes for the next train. Consequently, it was pointed out by interviewee JR that missing a train did not have major consequences.

*“(...) the frequency of the trains is really nice and even if I go out the door a little later I and I missed the first one, there would be three to five minutes until the next one, meaning that I will never be more than three to five minutes late for anything which I think is manageable.”*

– JR

The frequency of the trains also meant interviewees did not have to plan their travels to the same extent as when using other means of transportation and that one could simply instead hop on and off as one needed to and, thus, be able to be spontaneous in their use.

*“So if I give the example of the Metro that it goes like every two minutes, then I feel like it's more intuitive. You can just decide to take the metro and you just go.” – IL*

Lastly, it was pointed out by interviewees EG and IL that the trains also run frequently during nighttime, adding to their positive attitude towards the Metro as compared to other available means of transportation.

*“There's nothing worse than waiting 45 minutes at two o'clock in the morning in the freezing cold for a bus.” – EG*

### 5.3.6 Speed of Transportation

Building on the positive aspect of frequent Metro departures, interviewees BK, ND, NP, and SN pointed out that the Metro is one of the fastest ways of transporting oneself, also compared to other metro systems in the world. Interviewee IL attributed the speed of the Metro to bypassing all traffic and building on this, ND compared the experience to taking the bus, pointing out it is slow and stops everywhere. However, interviewee VG also pointed out that they in certain situations take the bus despite it being slower as it means they will reach the destination directly instead of having to change the Metro line. Building on this, interviewee SN points out that riders were promised faster travels with the opening of the new Metro line, yet expressed that they were ultimately not satisfied with the development. Nonetheless, SN later pointed out the fact that the Metro is fast as one of the main things they like with it, thereby acknowledging that the speed of transportation remains a key attribute in their attitude towards the Metro.

### 5.3.7 Reliability

Another theme that was frequently brought up throughout the interviews was the reliability of the Metro trains and interviewees EG, IL, JR, NP, and SN explicitly used this term to describe their opinion about the Metro. Interviewees ND and VG instead discussed reliability in relation to their previous experiences of metro systems in the Netherlands and Mexico respectively and concluded that the Copenhagen Metro was comparatively better as it is on time and, thus, never was the cause for them being delayed somewhere. The consequences related to the Copenhagen Metro always being reliable was also something that was addressed by interviewee IL.

*“(...) you also know it [the train] is coming. So even if there's a lot of people, you can wait and you don't feel annoyed that you have to wait.” – IL*

Interviewees EG, JR, NP, and SN stated that the Metro overall works well, and pointed out that the only time a train is late is if there is something wrong. JR frequently came back to this aspect and pointed out several times that the Copenhagen Metro is very reliable in their experience. The importance given to the reliability by JR could be attributed to their rider profile, as they mainly use the service to commute to work.

*“I don't need to wait forever for a Metro train unless something is wrong. And that's really, really nice as well as I don't really need to time anything.” – JR*



### 5.3.8 Operational Issues

Nonetheless, all interviewees except for IL shared experiences from when they encountered operational issues with the Metro. As exemplified by interviewees BK, EG, EJ, JR, and SN, a negative consequence of the Metro not running was making one late for work, which they established as a source of frustration.

*“I mean, it's not faultless. It can be very frustrating with all the technical faults and issues and errors, especially when you need to get to work. And then all of a sudden you find out that things are delayed or canceled and you have to stand there waiting because you expect to be able to take it within the next three or four minutes max, right?” – EG*

What is more, the quote by EG highlights that individuals appear to consider the frequency of the trains both when planning their trips and evaluating their experiences. Despite this, it was also acknowledged by BK, EJ, JR, and NP that the operational issues are rare, yet when they occur, they are greatly disruptive. Interviewee SN pointed out that the Metro used to not run a lot, but that that has improved. The following comment also builds on this.

*“It is a bit sad maybe for the Metro, but it's one of those things where you don't notice it when it works well. But it really stands out when it doesn't.” – EG*

Nonetheless, when compared to the operational issues experienced by using the train, it is by interviewee JR argued not to be an issue. Additionally, interviewee NP shared the experience of being stuck on a train, highlighting that the situation was not perceived as negative because they were not in a hurry. NP also pointed out that during the operational issue, the doors of the train were open at all times, thereby leaving them the option to exit the train at any time. By comparing this experience to the earlier comments on the Metro not running causing interviewees to be late for work, one can reason that the frustration related to operational issues is dependent on the current goals of a person. Additionally, whilst these can be argued as unplanned operational issues, interviewee ND also acknowledged a request for better communication in regards to when planned maintenance is scheduled to take place. Whilst a breakdown could be frustrating yet understood, there was expressed frustration by ND regarding the lack of communication regarding the scheduled maintenance. Despite this, ND also pointed out that there might be information available and that the fault lies with themselves for not actively looking for it.

### 5.3.9 Replacement Transportation

At times of operational issues, the Metro offers replacement transportation in the form of Metro buses. However, interviewees ND and NP expressed a dislike towards these and stated that they tend to avoid using the Metro if it had been temporarily replaced with a Metro bus.

*“So when there's a bus replacement, it's like back to the 'Oh no, now I have to take the bus' kind of feeling. (...) And I know that sometimes they, for example, skip stations and they don't run as often as the normal metro does so. I think it's just inconvenient.” – NP*

It was also pointed out that one cannot buy tickets on the Metro buses which had caused issues for interviewee ND, resulting in them having to rely on the friendliness of a driver who let them ride for free. Interviewee VG also shared an annoyance with the replacement transportation and put weight on the unavailability of information in such a situation.

*“(...) we were switching lines at Kongens Nytorv. And then the other line was closed, like my line was closed. So then we had to find a bus, which was a little bit annoying. Yeah, but then again, it's like we didn't know it was going to be closed because we didn't see any signage that would say so.” – VG*

### 5.3.10 Rejseplanen

When finding information about which route to take using public transportation, the app Rejseplanen is available for use. None of the interviewees were using this tool frequently and interviewees EG, ND, and SN ascribed the reason for it to the unreliability of the app in terms of its suggestions for route and type of transportation, as illustrated by the following quotes.

*“Um, yeah, of course I have Rejseplanen on my phone, but, um, that's usually not helpful because it's trying to suggest that you take the Metro that is not working.” – SN*

*“Because sometimes Rejseplanen has like really, really awkward connections. And I also found what's really weird is that between my group of friends, if one person looks up a route and the other one does the exact same, it sometimes gives different options, which is ridiculous. It hasn't happened to me personally, but I don't know. I think Rejseplanen definitely improve.” – ND*

Through the open nature of the interviews, the topic of checking prices ahead of traveling came up in the discussion with BK, and they admitted that they did not know one could use Rejseplanen to do this, which hints that there may be an unawareness regarding the capabilities of the app.

### 5.3.11 3<sup>RD</sup> Party Involvement

Interviewees EG, EJ, IL, JR, ND, NP, and SN brought up interactions with entities that are not directly the Metro but in different ways affected their experience with the Metro and all were related to purchasing tickets. A clear confusion was directed towards the many different apps available, and whilst many had the apps, it was also not sure which were to be used for what.

*“Yeah, because I didn’t know which app to use. And I was really confused about the different companies that run traffic in Copenhagen.” – EJ*

In discussing buying tickets, interviewee IL stated that they buy tickets through the DSB app but try to avoid it due to it not being very good. However, they also acknowledged an awareness for the DOT app but expressed a similar dislike for the user experience of that app. Additionally, interviewee SN shared insights regarding buying tickets for public transportation in Copenhagen via the Swedish transportation company Skånetrafiken and expressed confusion and frustration over the experience it had created from using it on the Metro in Copenhagen.

## 5.4 Acquiring Tickets

The experience regarding buying tickets to use the Metro was a recurring topic by all interviewees, and it was clear that these experiences directly influenced their attitude towards using the Metro. However, the ways of acquiring tickets and the subsequent experiences varied between the interviewees.

### 5.4.1 Buying Tickets Through the App

Similar to the general attitude towards the machines, interviewee NP acknowledged that they have used the app to buy tickets but generally tend not to. Whilst it was appreciated by NP to have the alternative to buy through the app in case of need and considered it rather easy to use, it was also pointed out by interviewee IL that there is more than one app to buy tickets, that they are not very intuitive, and that they tend to lag. This difference in experience can perhaps be derived from NP being a long-term resident in Copenhagen, whereas IL identifies as an occasional user, and could, thereby, be less informed about the know-how of the different alternatives at one’s disposal. Furthermore, NP mainly uses the app to complement Rejsekort, whereas IL uses it as the main way to purchase tickets, thereby, arguably using it more often.

*“It's always like malfunctions sometimes and it's like it crashes. And I know there's.. There's another app for the Metro like DOT or something.” – IL*

#### **5.4.2 Buying Tickets with Rejsekort**

Interviewees BK, EG, JR, NP, and ND stated they mainly use Rejsekort for buying their tickets and appreciated its convenience.

*“And especially now with Rejsekort, it's just really easy to go, you don't have to buy a ticket. You just check in and go and check out at your destination.” – ND*

Interviewee VG stated that it is beneficial that one does not need to register a personal Rejsekort to buy tickets, meaning that also tourists can make use of its benefits. Yet, there were also certain frustrations related to buying a ticket with Rejsekort. Whilst one can buy a personal Rejsekort, it is also possible to buy an anonymous one, as done by interviewee ND. However, ND expressed annoyance with having to have a minimum of 70 DKK on the card to be able to use it and considered this inconvenient. Interviewee BK further expressed frustration when bringing their bike on the Metro is that one cannot recharge the Rejsekort on the platform of the underground stations, then having to take the elevator up the street level, only to go back down again. Interviewee BK also pointed out that one needs to check in to know how the balance is left on the Rejsekort, and that one does not know until checking out how much one will be charged for the fare.

*“I just talked about Rejsekort with a friend of mine, although that's not really metro related, but just in general that it's kind of annoying that you never know how much you're going to pay.” – BK*

#### **5.4.3 Economic Aspect**

Whether taking the Metro was considered expensive or not seemed to be dependent on the context. Whilst interviewee IL appreciated having the option of taking the Metro from the airport, thereby not having to pay for a taxi, interviewee ND stated it was very expensive and compared the prices to those in the Netherlands, calling for cheaper prices as an incentive for people not to use cars. Whereas ND had been a frequent metro user in a different location, there was no metro available in the previous location of IL, and one could, consequently, argue this influenced the opinion of the value received for the money spent. A comparison to the S-train was also made by interviewee ND, as one can take the bike for free there but have to pay extra to bring it on the Metro. It was further pointed out by interviewees BK and ND that one often chose to go by bike instead, as this was the cheapest alternative, however, the

following quote illustrates reasoning for how the need for the Metro services ultimately can make the economic aspect less of a priority.

*“I don't specifically check it [the price], because if I need to use the Metro, it's because I really need to use it, because otherwise I would have gone by bike or something. And so then price is not a priority at that time.” – ND*

With the opening of the new M3 Metro Line, the prices were increased and interviewee SN shared how this change had negatively influenced their experiences. This change in pricing indirectly forced SN to buy a more expensive subscription that included the new line despite not needing it. This decision was ultimately made motivated by the anxiety of receiving a fine, further illustrating the impact of the economic aspect.

*“So from being an OK experience, it like started to be laced with all sorts of anxiety. You know, the actual trip 'oh, am I going to get checked? Is this guy going to know that I am actually legally covered?' Not legally, but you know, not freaking trying to deceive anyone. I have paid, in all honesty - a lot of money for taking this trip.” – SN*

#### **5.4.4 Zoning Issues**

Another impactful matter brought up by interviewees BK, EG, EJ, ND, and SN were issues related to ticketing zones. Interviewee BK stated that when first arriving in Denmark, the different zones created struggles in regards to buying a ticket for the Metro as they did not understand which zones they would travel through to reach their destination. However, they acknowledged that this might be due to their infrequent use of public transportation in general, and, thus, pointed out that the confusion might be due to the individual themselves. Interviewee EG further pointed out that zone distinctions should be clearer, as one could inadvertently travel out of the zone if one fails to get off. However, significant issues related to zones were brought up by interviewee SN as they shared experiences of having the combined subscription from Copenhagen Metro and Skånetrafiken in Sweden.

*“There's always been a little bit of a blurry line or misunderstandings between Skånetrafiken and in the Metro.. The Metro in Denmark about which zones or which areas in particular my type of subscription covers. And from my experience, uh, typically the ticket controllers on the.. On the like, on the.. In the train system are more aware of this whereas the Metro ones are, I don't know, never up to date on this thing, so they tend to be very, very unpleasant about it.” – SN*

As the only interviewee of this study having such a subscription, no comparison to others can be made, but one could, nonetheless, reason that interviewee SN is likely not to be the only commuter in the Øresund Region that has encountered such issues. As illustrated by the

following quote, there seems to be a lack of agreement between the two transportation companies in regards to zoning, which further trickles down into how riders are being approached when traveling.

*“So the guy checking my ticket insisted that I didn't have the correct zone even though I had been told the opposite, basically by the company I bought the ticket from. So it ended up with me having to spend a lot of time talking to both sides and getting them to agree on a conclusion.” – SN*

## 5.5 Information Availability

A shared category in the interviewees' narratives prominently revolved around information about the Metro and its operations. With particular focus, the interviewees described their experiences as to how they obtained relevant information and shared their experiences about the degree to which they find relevant information.

### 5.5.1 Orientation & Navigation in the Metro

The accounts provided by the interviewees addressed their evaluation of how they orientate themselves and navigate the Copenhagen Metro. Consequently, interviewees BK, EJ, ND, and SN shared the opinion that the station design makes it easy for them to navigate the Metro. Interviewee SN's account explicates this.

*“No, I find the stations that I'm familiar with easy to navigate. And I have my own routines, right? (...) But I know if I'm (...) at a different station, I often get confused.” – SN*

Contrastingly, interviewees EJ and IL expressed the opposite belief and, thereby, argued that the stations' monotone design makes them harder to navigate.

With the opening of the M3 Line and its circular design, the interviewees argued that they find it complicated to understand which direction of the train they ought to take in order to arrive at their destination in the fastest of ways. Interviewees BK, EG, EJ, and IL claimed that understanding which train is the fastest may require them consulting the station overview and counting how many stations separate them from their destination for each of the two directions. Interviewee EG elaborates on the confusion in the following way.

*“(...) I really struggled with the new Ring when it first opened, so I had to stand there looking like a complete melon for about two minutes, working out what was going on. So that was very, very confusing. I found that quite... I don't know why I found it confusing?” – EG*

However, interviewee NP provided the opposite account and states that the Metro is generally easy to navigate as there are only a handful of lines and that they find it easy to remember

what direction takes the rider to their destination. Hence, these arguments speak to the individual competence and knowledge of the Copenhagen Metro system that the riders possess.

### 5.5.2 Language Barrier

The following code is intrinsically focused on a communicative aspect of the interaction between the various stakeholders as not all of the interviewees are native Danes or speak Danish – the primary communication language of the Metro Company.

The interviewees pointed in their accounts towards an inconsistency in how the Metro communicates with the riders through loudspeakers at the platforms and on the trains. Interviewee BK stated that the communication happens in both Danish and English, based on their experiences. However, interviewees VG, SN, and EG argued that the communication happens in Danish and, thus, those who do not speak Danish will not understand the ongoing situation and the message from the Metro Company. Interviewee VG underlined their experience followingly.

*"I think my biggest, like complaint about the Metro here is when something goes wrong and they announce it that they only announce it in Danish and I don't speak Danish." – VG*

In addition to the impersonal communication, interviewees SN and BK accounted for instances in which they communicated with the personnel in English and expressed their belief that the staff may come across as unpleasant upon switching to English. To that end, SN stated that interacting with the personnel due to the language barrier becomes a stressor.

*"I feel like most of the ones I've dealt with personally are not that good at English and that makes them insecure and a little bit more.. I don't know. It just changes how the conversation takes place. I've seen them being much nicer to other people who were speaking Danish." – SN*

### 5.5.3 Communication

Communication aspects are consistently present within the interviewees' accounts due to the multiform of communication channels that the Metro riders may encounter, such as personal interactions with staff, or searching for information online.

Interviewees EG, SN, NP, and ND expressed frustration over lacking information from the Metro in cases of disturbances caused by maintenance and other external influences on traffic. Interviewees SN and ND used rationalizing techniques in their accounts by arguing that even though the inflow of information is occasionally dissatisfactory, they ought to be searching for

Metro Company's communication themselves. Nonetheless, interviewee EG assumed that the lack of information divulged to the riders may stem in the Metro Company not knowing themselves.

*"Sometimes the announcements are quite informative and they are OK. And then there are other times when they, I'm assuming behind the scenes, they don't know what's going on either. And they know they have to announce something, but they don't know what to announce and it just feels a bit like that. So it's sometimes the communication isn't great."* –

EG

However, interviewees JR and NP are overall satisfied with the information and communication flow of the Metro. Interviewee JR uses Twitter to follow the current traffic situation, allowing them to make an informed decision whether they should take the train or Metro for their journey. Interviewee NP argued that when a disturbance occurs while they are on the Metro, the information is delivered to the riders frequently.

*"They came with the updates on the speakers often. And so I think we were all well informed. I don't know how often. I don't remember, maybe every like two or three minutes or something."* – NP

#### **5.5.4 Signage**

When asked about the signage guiding the interviewees' behavior and navigating them around the Metro's stations, the interviewees generally commended the Metro. Interviewees EG, VG, EJ, IL, JR, and ND stated the signage is clear and provides a good overview of the stations. Furthermore, interviewee JR indicated that even though they find the signage at the Metro clear to understand and follow, they acknowledge that it is individual and may differ from person to person how it is evaluated and understood by a rider. Thus, JR showcased a consideration for their fellow passengers who are not as frequent Metro riders.

The interviewees VG, NP, and ND praise the Copenhagen Metro for appropriate signage at stations where the passengers can switch between the Metro lines, or other means of transportation. The interviewees argue that the signage positively impacts their experience and allows them to navigate the complex stations efficiently.

*"But for example, if you were to go to Kongens Nytorv and you want to change from M3, M4 to either M1 or M2, then it's nice that they say 'There's the exit and there still are the other lines coming.'" – ND*



## 5.6 Effect of Design

The following section of the paper establishes the role that the design of the Metro in Copenhagen plays. The interviewees thoroughly described, accounted for, and evaluated their encounters with the various design choices identified by the interviewees.

### 5.6.1 Check-in & Check-out

When the interviewees take the Metro, many of them make use of Rejsekort to pay for public transportation tickets. Yet, the usage of Rejsekort poses some challenges for those interviewees who are not versed in the system or using the Copenhagen public transit system. Interviewees BK and SN argued that it was easy for them to forget to check-in and check-out when using Rejsekort, resulting in a fine during a ticket control on the train.

*“And in the beginning, now I'm super used to it, but in the beginning I always forgot to check out. So that was kind of mad. Maybe a sign for that. Like, don't forget to check out guys. That will be great.” – BK*

*“So for my regular commute and for anything else, I have to use the Rejsekort. And I had very poor experiences with that, mainly because of myself, because I'm not used to using it. So I forget to freaking check in, I forget to check out. And that hasn't been.. It hasn't been nice.” – SN*

Similarly, interviewees EG and NP put forward their experiences with a problematic check-out from the Metro. The interviewees argued that the placement of the Rejsekort readers intended for checking-out and, thus, concluding the rider's journey, created a bottleneck effect which resulted in queuing of passengers to use the Rejsekort readers near the elevators and escalators leading outside of the station.

*“And it's the same bottleneck effect, actually, when you get off and you are sort of beeping out with your card. (...) So even though there are other places where you can beep out, you just go for the one that's convenient to you, which is also convenient for everyone else.” – EG*

Interviewee EG used their previous experience from the London Underground and the Oyster Card, i.e., a comparable counterpart of Rejsekort. Therefore, the interviewee claimed that Copenhagen Metro ought to seek inspiration from London and eventually make the usage of Rejsekort easier for riders so that queuing can be prevented. However, utilizing their previous experience as well, interviewee EJ claims that the placement of the Rejsekort readers and not having to scan one's ticket to enter the station makes it a more pleasant experience compared to the metro in Stockholm.

## 5.6.2 Accessibility

The interviewees' accounts also shed light on their perception of the Metro stations' accessibility. As there are various profiles assembled among the interviewees, it means that their individual accessibility needs differ. Interviewee EG, a parent, argued that the Metro stations could be inaccessible if the elevators from street level to the platforms do not operate.

*"I can remember when I had very small children and I had a pram, it would be very frustrating when the lifts weren't working, which could happen quite regularly, because then there's no way of getting up there."* – EG

Simultaneously, the interviewee wondered how mobility impaired passengers are to access the stations if they need a wheelchair, yet the elevators are out of order. By the same virtue, interviewee ND takes their bike onto the Metro to continue their journey instead of having to walk. They also, however, express that not being able to use the elevator hinders them from using the Metro if they wish to take their bike.

## 5.6.3 Station Design

In their accounts, the interviewees most frequently addressed how the Copenhagen Metro is designed and how the design impacts them. Commonly praised in the narratives, interviewees BK, EJ, ND, NP, SN, and VG expressed their belief that the Metro is designed in a way described as modern, minimalistic, sterile, and intuitive. Additionally, the stations' lighting has been ongoingly regarded by the interviewees as a positive design choice which also increased the interviewees' perceived safety at the stations. Interviewee ND argued that the design might directly impact their sense of comfort.

*"I like that it's quite modern, it's quite a contemporary modern outlook. And as I said, that also, you know, if you have a if you have a metro station that looks like it's been through something, then I'm also less likely to feel comfortable (...)"* – ND

However, where some interviewees described the Metro's sterile and minimalistic design as a positive aspect, interviewees EJ, IL, and NP also argued that Metro stations were not inviting for their passengers and their visual design to be monotone and boring. Hence, EJ and IL argued that the stations should be given a mark that will quickly make the stations identifiable. On the other hand, interviewees JR, NP, and VG demonstrated awareness about the M3 Line stations being given a unique design that should distinguish them from other stations, as showcased by JR's statement above. Simultaneously, interviewee VG, who is an industrial designer, offered a point of criticism towards the Metro for failing to inform the passengers

about the reasons for why the M3 stations look the way they do and what the meaning of various artworks at the M1/M2 stations is.

*“I don't, I haven't really seen anything of the reason behind it though, because I would imagine that the architects had a reasoning behind each selection of materials decoration or even like lighting. (...) Why is it that there are some balloons in some of the metro stations and is that for a reason? Is there reasoning behind it of the area that you're in? But that would be nice if there could be a bit of a storytelling there.” – VG*

Ultimately, the interviewees were broadly satisfied with the station design and argued that it is in line with Copenhagen's overall atmosphere.

*“So I feel like they've been very good in designing the City Ring into the existing city and making sure that they combined both the historical and the new together.” – JR*

Furthermore, the station design is conceived as an open space that gives the riders a feeling of perceived spaciousness. Interviewees BK, EG, EJ, and JR articulated their satisfaction with such a design as it gives them an easy overview of the whole station. In opposition to that, interviewees EJ and IL claimed that the stations are small, which may lead to a feeling of discomfort and crowdedness, especially during rush hours.

Finally, interviewees EG and NP claimed that even though they previously praised the overall design, they believed that the stations create a bottleneck feeling for them and their fellow passengers streaming in the same way as the stations only have one exit. This is further magnified in situations when many passengers begin to queue in order to check-out from the trip using their Rejsekort, as addressed in 6.1. *Check-in & Check-out*.

#### **5.6.4 Train Design**

Interviewees BK, EG, IL, SN, and VG argued that there is an adequate amount of light. Simultaneously, interviewees BK, EG, EJ, and JR expanded on their views and stated that the trains are spacious and feel comfortable.

*“Well, they [the trains] kind of feel a little bit like airport shuttle trains. To me, they don't really feel like a classic metro, but I don't have any value added to that.” – EJ*

Although, when examining EJ's statement, their liking of the train design does not provide them with any additional value. On the other hand, interviewees BK and NP gain additional value as the driverless design of the train allows them to sit at the front of the carriage and observe the journey from there.

*“It always puts me in a good mood to sit in the front [of the train], actually, because I like seeing the stuff going on.” – BK*

Interviewees IL, JR, ND, and NP discussed the Metro trains' autonomous driving and its effects on how they perceive the Metro. Thus, it ought to be argued that the trains' technology gives the interviewees a high-end feeling. Besides that, the computer-controlled carriages provide the aforementioned interviewees with a feeling of safety as there is no space for human errors.

*“I guess also the fact that it's not run by anybody, it is just automatic, it's basically a computer runs it. Then I feel like (...) there's no place for human error. And somehow, I guess it just contributes to a general safety feeling, even if it's not related to the people that are in the train.” – IL*

What is more, interviewees EJ, IL, and JR provided an account where they stated that the Metro trains used in Copenhagen are relatively short and, thus, do indeed offer a limited amount of space. EJ provided a comparison in Copenhagen and Stockholm experiences in which they see the length as a benefit because they do not have to walk far across the stations to board the train. Contrastingly, interviewee JR perceived the length negatively and argued that it contributed to crowdedness on the train.

Additionally, interviewees EG and IL argued that in rush hours, the Metro train doors can open and close very fast, preventing some of the passengers from leaving the train. As a former commuter, EG stated that using the Metro can become a stressful experience when the train is full as exiting may not be possible.

*“I'm just trying to think in terms of when there are a lot of people, it can feel very bottlenecky sometimes trying to get on and off. And I think part of that is because the doors are so quick to open and close. So everyone's a bit worried that they're not going to get on the train, especially if they've been waiting a long time.” – EG*

### **5.6.5 Seating on the Train**

Interviewees EG, JR, NP, and SN concluded that the Metro Company has succeeded in designing the trains so that there is a reasonable split between seating and standing spots. Interviewee JR commended the Metro for changing the seating layout in the M3 Line, which has, in their opinion, improved the overall experience of taking the Metro. However, interviewees EJ, IL, and SN disclosed that the train seats are not inviting and comfortable to sit on. They argued that the plastic material and the lack of cushioning on the seats make them slippery, which poses a challenge when the train brakes and accelerates. Additionally, interviewees EG and NP pointed out that not only the designated seats but also the window stool resting benches in the newer Metro trains are uncomfortable, if not impossible, to sit on.

*“Yeah, that little, really small ledge that you can rest your bum on. And I'm not quite sure who it helps because it's so low down. You can't really rest properly without having sort of thighs of steel and being able to squat in a permanent position for ten minutes or whatever.”*

– EG

Interviewee NP agreed and elaborated by saying that these slippery benches make it uncomfortable for them if there is a stranger next to them as they fear they would slip onto them. Thus, the interviewee displayed frustration in asking why the Metro has not fixed the flaw.

*“I have thought about that a long time ago, and I think they should make some rubber dots or something else that could eliminate the problem. I think it's an easy solution to the problem.*

*And I don't understand how they haven't done it before.”* – NP

## 5.7 Influence of Others

A theme that was frequently addressed in different forms in relation to the Metro by all interviewees was how their own experience was influenced by others.

### 5.7.1 Personnel Interaction

An aspect discussed in extensive detail by all interviewees was their experiences with interacting with the personnel of the Metro. Whereas both interviewees BK and EG shared situations in which they had been screamed at and accused of wrongful behavior, EG also pointed out that not all employees behave the same and acknowledged that, despite their negative experience, the treatment of riders by the staff appears to have improved.

*“Some are very friendly, others, I think are very, you know, they almost treat you as you've done wrong until you've proven yourself right. And then others are really friendly and charming, I think. I don't know if they've had some kind of courses or something in the last few years, because I think especially in the last few years, it's a lot better. Certainly, like more than five years ago, I thought they could be very, very abrupt and brisk.”* – EG

This can be compared to the account pointed out by interviewee EJ, who stated only having had positive experiences with the Copenhagen Metro personnel. However, this attitude was derived from their negative experience with the Stockholm Metro, where it was argued one feels threatened as they tend to approach passengers in large groups, thus, also emphasizing the relative manner in which the experiences are being evaluated through. The impact personnel interactions can have was also pointed out by interviewee ND, who stated they had to rely on the friendliness of a driver when not being able to buy a ticket, thus, showcasing that

the behavior and attitude of employees directly influences the experiences remembered by interviewees.

### 5.7.2 Ticket Control

Related to the personnel interactions were comments made specifically in relation to ticket controls. Interviewees BK, EJ, IL, JR, ND, and NP agreed on it being a quick and neutral experience, offering little commentary on the reasons for this. ND even stated they like getting checked, as this makes them feel like they received value for the money spent.

*“I personally like it when I get checked because then I feel like I actually paid for something, because if I don’t get checked, I’m always secretly in the back of my mind and like ‘I could have just not paid and gotten away with it which I would never do anyway.’” – ND*

Interviewee VG, however, stated that they experience it as if the controllers like to assert their dominance, and interviewee SN shared similar concerns, having been threatened and given fines despite having a ticket. However, SN did also point out that the competence of controllers adds to the anxiety felt from getting their tickets checked. The two following quotes further illustrate the account of SN.

*“Oh, it’s horrible. I.. I.. I dread the sight of those guys and it’s not their fault entirely. It’s, it’s mostly got something to do with the way that the.. Yeah. The, the company that I buy my train subscription for train plus Metro subscription from has chosen to deal with the zoning issue of yeah.” – SN*

*“Being an English speaker obviously does not help at all. So that’s.. That’s an extra stress factor for me when I have to have an interaction with one of these guys (...) So now whenever the interaction requires more than yeah, ‘Show me the ticket, there it is, thank you’. Uh yeah, for me, it just becomes a little bit worrying.” – SN*

### 5.7.3 Social Aspects

The Metro experience is, however, not limited to only interactions with the personnel. Both interviewee BK, NP, and VG discuss that other social influences also impact both how they perceive an experience and how they behave. BK stated that due to being a foreigner, they tend to listen to and rely on the advice of others, and similar reasoning was displayed through the account of VG who also as a foreigner that does not speak Danish have to rely on imitating the behavior of others if the trains are not running. Interviewee BK also shared the thought process behind not taking the Metro in certain situations and ascribed this to the social aspect.

*“So sometimes then we decide on taking the bus because that’s like kind of in between the final destination to both of our houses, although Metro would be more convenient for me in*

*terms of distance, but. Yes, sometimes you just take the bus because that's the best for the common.” – BK*

Interviewee, NP showed appreciation towards being able to follow the work of building the new Metro through online channels as it was stated to make them feel a sense of connection with the people in Copenhagen. Thus, it was indicated that the influence of the social aspect is not limited to one-on-one interactions but that it can also influence one's experience on a broader level.

#### **5.7.4 Presence of Others**

Nonetheless, it was established that the mere presence of other riders impacted the experience of interviewees. Interviewees EG, EJ, IL, and JR pointed out that the trains and platforms can be crowded, yet also stated that this happens infrequently. Interviewee IL also stated that they would “*give up*” in the sense of entering a Metro train in case there are too many people, thereby showcasing that the presence of other riders directly influences one's experience and consequent behavior. Nonetheless, interviewee BK pointed out that in times of fewer people onboard a train, one can easily move around the train in case of a presence of unwanted fellow riders.

What is more, interviewee SN further pointed out that seeing a huge crowd of people can indicate that there is an operational issue, thus, illustrating how the presence of others also serves as an informational cue for them. Contrary, the presence of other people can also act as a safety measure, as both interviewee BK and JR point out that due to the open space, one has a clear overview of other people in the Metro which means they never feel alone, thus, giving them a sense of safety.

*“I like that I at least always.. It's kind of like an open space, so I have like a clear overview of the people who are sitting there and it's like.. I'm almost always in.. Like I'm always never alone. It's always like with other passengers. And then I think that gives me a sense of safety.” – BK*

#### **5.7.5 Feeling Safe**

The aspect of feeling safe in and around the Metro was another question specifically asked but also a topic that continuously resurfaced per the initiative of the interviewees. This was a multifaceted topic, where a broad range of aspects was pointed out. Safety was discussed in terms of not being harmed by others, and interviewees BK, EG, EJ, IL, JR, and VG pointed out that most of the time, they feel safe in regards to using the Metro. However, BK and EG speculated whether this can be attributed to the general feeling of being safe in Denmark, and

interviewee EG, EJ, IL, and SN discussed how during what time of the day one takes the Metro impacts one's experience concerning feeling safe. Additionally, it is brought forward by interviewees EG and VG that the design of the Metro and its surroundings, especially the amount of light, adds to their feeling of safety, cf. 5.6.3. Station Design.

*"(...) another thing that makes me feel safe is that the elevators are glass, like you can see through all the time. That makes it feel... You know, dark spaces are scary. Yeah, so it's like just knowing that people can see through all the time is quite reassuring."* – VG

Furthermore, interviewees EG, JR, and SN pointed out feeling uncomfortable due to the behavior of others, such as other people arguing. Whilst they were not involved in this interaction themselves, it still impacted their experience.

*"People arguing that this kind of thing, not that.. Like you don't feel threatened, but you don't feel 100 percent comfortable being there."* – SN

### **5.7.6 Rider Interaction & Avoidance**

It has been established that both the presence of others and the social aspect impact one's experience with the Metro. Complementing this understanding of the influence of others is the interactions with other riders. It was clear that the majority of interviewees aimed to avoid contact with others, as stated by interviewees EG, IL, JR, ND, NP, and SN. One could, however, reason that this is conforming to the expected behavior of people on a Metro, as it is also commented by ND and IL that people generally mind their own business when using public transportation.

*"I feel like you don't want to interact with people on public transportation in general. I feel like the positive side of public transportation is, you know, when you're not in control, so you can just not think about anything and just like enjoy the ride."* – IL

Nonetheless, interviewee IL points out that interactions are not necessarily bad, but rather unusual. Interviewee JR builds on this, by sharing that their desire to avoid unwanted interactions can even cause them to leave the train.

*"(...) if the few times people have wanted to take a longer chat, I don't, I haven't really felt like it and I've tried to shut it down or got up and gotten off the train."* – JR

Through this comment, the element of *"feeling like it"* is introduced. Interviewee BK adds to this, by arguably unknowingly pointing out several times that their mood affects how they perceive an interaction as illustrated by these comments.

*"I was in a good mood and he was really kind, so I wouldn't mind."* – BK



*“(...) sometimes you just don’t want to sit nearby to people who are having, let’s say, like a loud conversation and, you know, that they are super drunk and then you are just not in the mood to interact at the moment.” – BK*

### **5.7.7 Alcohol Consumption**

Through the nature of the open discussion, the usage of alcohol in and around the Metro stations came up in the dialogs with interviewee BK, EG, EJ, JR, NP, SN, and VG, thus, demonstrating that this context has impacted their experience. All but EJ acknowledged that they have been in situations in which drunk people and their behavior have affected their experience negatively. However, an understanding tone is also used to describe this, as interviewees EG and NP point out that they have at some point also been the person consuming alcohol on the Metro.

*“It’s.. It can be a bit like a moving pub at times, which is sometimes you just want to get home and you can’t be bothered with the... Yeah, you can’t be bothered with the loud partying people. But at the same time, I was once one of those loud partying people, so I need to just not be a grumpy old woman.” – EG*

*“I feel fine because I have done it myself. And I mean, it is normal if you’re a few people and you’re going somewhere and you have, I don’t know, maybe 10, 15 minutes with public transport, why not, like, get a beer on the way?” – NP*

The statement by NP also highlights that one might even make use of the time spent on the Metro in this regard. This is exemplified by pointing out that the Metro once played a role in their social life, as it was used as a means for a recurring drinking game. Contrary, interviewee VG states that one would like to calm down whilst being on the Metro, as one is on a means of transport. They further claim that one is not allowed to drink on the Metro, which illustrates a misunderstanding that might have impacted their perception of the matter. VG additionally acknowledges the experience of being a girl on public transportation when there are drunk males around but does not go into further detail about this.

### **5.7.8 Sharing Experiences**

It was acknowledged by interviewees ND, NP, and SN that something out of the ordinary must have happened for them to share their experience, and this was true for both negatively and positively valenced experiences. NP also pointed out that they would discuss the Metro being late with others and building on this, interviewee EG acknowledged the functional side of the Metro, as illustrated by the following comment.

*“Oh, yeah, every time with colleagues when it's been late or delayed or there have been issues or so. Yeah, probably if I'm being completely honest more frequently to moan than to praise. I think it's one of the... It is a bit sad maybe for the Metro, but it's one of those things where you don't notice it when it works well. But it really stands out when it doesn't.” – EG*

Interviewee NP points out that they are likely to share an experience with others if something funny takes place. The following comment by interviewee EJ also illustrates how unusual experiences tend to get shared more frequently.

*“I hadn't had those amazing experience of seeing, like drunk people running in the train, bumping their head against the glass and so on. But there were some urban legends that circulated.” – EJ*

### **5.7.9 Cultural Aspects**

A theme that emerged throughout the discussion was the cultural aspect and its influence on one's experience. Consequently, the interviewees painted a clear picture illustrating how a different cultural background impacted what one perceived whilst being in and around the Metro. Interviewee BK pointed out that there is a difference as to how sociable people, who have embraced the Danish culture, are as compared to other cultures, and expressed a desire for random interactions.

*“And sometimes I miss these things actually from Denmark or like the Danish society that people actually engage in random conversation. Um, and actually he was even asking me, like 'Where are you from? Because you are clearly not Danish.' and then I was like 'Yeah, I'm not'. Yeah, so I actually liked it.” – BK*

The cultural desire to avoid interaction can also become destructive. As illustrated by interviewee VG, not only do people simply not engage, they have also experienced multiple times that other riders also actively avoid them. They further speculated that this might be attributed to their appearance not being typically Danish, and acknowledged that they have experienced racism.

*“But in my experience as being Latin and not looking like people here, and that's not Metro's fault, it's just the cultural difference. People don't really talk to me or sit next to me. So. Yeah.” – VG*

The impact of one's background is also brought up by SN as they established that having grown up in an Eastern European country influences how they perceive crowded trains.

## 6. Analysis

The following chapter provides an analysis of the collected data in regards to the previously established theoretical framework. Through critical reflections, the outline for answering the research question is presented.

### 6.1. Value Perceptions through Holistic Experiences

The individual experience of a service exchange impacts the perceived value and consequent value process (Gentile et al. 2007). The negative value process, referred to as value co-destruction, is further defined by Ple and Chumpitaz Cáceres (2010, p. 431, stress added) as *“an interactional process between service systems that results in a decline in at least one of the systems’ well-being.”* Thus, in order to answer the research question of this paper – how does the utilization of actors’ resources in value processes impact the well-being within a service ecosystem – it is of utmost importance to first establish the impact of the individual experience. As changes in well-being result from the different value processes derived from individual experiences, the following insights assist in proposing an answer to the research question.

Throughout the data collection, the interviewees provided their accounts by sharing their various experiences. These experiences further functioned as the guiding base when establishing the codes and subsequent themes presented in the findings. Whilst the majority of interviewees had experienced similar situations, this research draws value from understanding the varying reactions as expressed by the individual interviewees as this impacts individual well-being, and ultimately the ecosystem’s well-being.

#### 6.1.1 Identifying Components

Value is experienced individually (Vargo et al., 2020), and a clear example of this was showcased in the context of bringing bikes onto public transportation cf. 5.3.4. Bikes on Public Transportation, in which two interviewees had distinctly different experiences from this similar situation. Here, interviewee BK and JR represented each side of the spectrum, where the former expressed frustration over not being able to bring their bike in rush hour as this would ease their travel. Contrastingly, the latter expressed frustration with other riders bringing their bike regardless, which caused frustration for JR. In this instance, one can derive that difference in experience stems from their different rider profiles - the former being an occasional user and the latter a commuter. Here, the assumption is that the commuter takes

the train every day during rush hour and, thus, often experiences being crowded, subsequently leading to frustration when other riders further add to this by bringing bikes.

The framework proposed by Gentile et al. (2007) suggest that the customer experience is made up of six different components: sensorial, emotional, cognitive, pragmatic, relational, and lifestyle, cf. *2.1.1.2. Understanding the Holistic Experience*. By analyzing the bike example through the context of the Gentile et al. (2007) framework, it can be argued to represent the effect of the **lifestyle** component on the respective actors' perceived experiences. As suggested by the framework, this component impacts the value each customer perceived, and as the two interviewees have different lifestyles, the perceived value differed. This finding is also in line with the argument of Schiavone (2020), who argues that contextual factors, such as the rider profile and it being rush hour, impact the perceived value. Additionally, it resonates with the argument of Tombs and McColl-Kennedy (2003), who posit that the perception of an environment is affected by its context. When applying these arguments into a real-life context as done through the findings, it is evident why and how different interviewees have different experiences of the same situation. Thus, by analyzing the various experiences, it sheds light on how the consequent value processes impact the well-being within the service ecosystem.

The remaining components of the framework can also be identified in the findings – the **emotional** component constituted of feelings, emotions, and moods (Gentile et al., 2007) was clearly identified in the account of interviewee BK who, on numerous occasions, stated that their mood and feelings had directly impacted their experience. The following quote illustrates this.

*Um, yeah, I was really happy about it. I was in a good mood and he was really kind, so I wouldn't mind. And sometimes I miss these things actually from Denmark or like the Danish society that people actually engage in random conversation.” – BK*

Gentile et al. (2007) argue that a customer experience is multidimensional due to the different components related to it. Whilst we find data supporting these different components, as shown above, it is, however, crucial to acknowledge that the model proposed by Gentile et al. (2007) adopts a dyadic customer-company view on the actors involved in the experience. Nevertheless, the framework was introduced under the SDL logic, and corresponds with the SDL literature at the time where value was argued to be co-created between the customer and the company (Vargo & Lusch, 2004). However, the terminology and consequent scope was since then updated, as the A4A concept was introduced (Vargo & Lusch, 2008; Polese et al., 2017). This update allowed for a broader understanding of the involved actors, which was also found in this paper. As showcased throughout the findings, the interviewees' experiences

with the Metro are not limited to the value propositions of only the company and direct interactions with the Metro itself, but instead are subject to a variety of situations with a number of different actors. In the context of the previous quote, “he” refers to another rider and not a company representative, yet this interaction impacted the experience of BK, thereby illustrating a limitation of the Gentile et al. (2007) framework.

Another aspect not addressed by the framework of Gentile et al. (2007), yet was strongly present when analyzing the interviewees’ experiences with Copenhagen Metro, is the effect of an individual’s previous experiences. As shown in the findings, cf. 5.2.5. Comparing Metro Systems, the majority of interviewees expressed their experiences of the Copenhagen Metro in relation to their experiences with other metros around the world. As illustrated by the following quote by interviewee ND, their experience of the Copenhagen Metro is positive because of their previous negative experiences with the Dutch metro.

*“I’m quite biased because the metro in Holland is the sh\*ttiest thing ever. And so I find the metro in Copenhagen quite good.” – ND*

Thus, it is proposed to expand the framework by Gentile et al. (2007) to incorporate a component of previous experiences to depict the dimensions that impact the customer experience accurately. Nonetheless, Becker and Jaakkola (2020) argue that the literature on what constitutes customer experience is scattered. This further poses the question regarding the boundaries of customer experience - does it only include the specific interaction when a customer perceives value from the value proposition of the company, as suggested by Gentile et al. (2007), or does it include any and all direct or indirect interactions over time, as suggested by Lemon and Verhoef (2016). Regardless of the scope, it is argued that the previous experience of a customer will always impact the value they perceive.

Gentile et al. (2007) further argue that customers are not able to separate the different components making up an experience but rather treat an experience as a unitary feeling. However, this study finds an indication that customers may be able to separate the components to some extent. Interviewee ND stated the following.

*“I live near Nørrebro station and it’s not the best neighborhood, I would say. And sometimes it can make you feel quite uncomfortable. But that’s not the Metro’s fault. It’s the people in it.”  
– ND*

As illustrated by this comment, the interviewee is aware that the **sensorial** component of the surroundings causes them to have an **emotional** reaction that ultimately impacts their experience of using the Metro. However, whilst ND can cognitively separate the reasons for

the perceived experience, they still appear to experience the situation as a unitary feeling, as suggested by Gentile et al. (2007), by acknowledging it as uncomfortable. Nonetheless, there is also an awareness displayed by ND that the value proposition perceived by them is not put forward by the Metro themselves and is, thus, able to point out that the negative experience is not the Metro's fault.

### 6.1.2 Broadening the Contextual Understanding

As illustrated by the preceding arguments, it is clear that the experience had by a customer is not limited to the value proposition offered by a company. This is in line with the arguments of Heinonen et al. (2010) who argue that the company is not in complete control of the customer experience. The literature on touch points consequently argues that some aspects are in control of the company, whilst others are not (Lemon & Verhoef, 2016), yet regardless of who is in control, they still affect the customer experience. For instance, the previous example of ND regarding the Nørrebro station area highlights the impact of the neighborhood, illustrating the effect of an **external touch point** (Lemon & Verhoef, 2016) - its impact is not within the power of the customer or the company but still affects the experience and value perceived by ND. Here, it can be reasoned that well-being decreases as ND experiences value co-destruction from being uncomfortable in the area.

It is argued that touch points are dynamic and of various importance (Lemon & Verhoef, 2016). This would mean that the individual's experience derived from touch points will vary over time and that different individuals will have different perceptions of the touch points. A clear example of this was found related to checking in and out using Rejsekort. Interviewee BK points out that there has been a development regarding their experience of checking out, as they have gotten more familiar with the system. As illustrated by the following quote, this touch point used to cause a negative experience but is now of lesser importance and, thus, less impactful.

*“And in the beginning, now I'm super used to it, but in the beginning I always forgot to check out. So that was kind of mad. Maybe a sign for that. Like, don't forget to check out guys. That will be great.” – BK*

This quote also highlights an aspect not directly addressed by Gentile et al. (2007) - the impact of the surroundings of where the experience is taking place. Bitner (1992) argues that the servicescape, i.e., the surroundings, and its atmospherics, i.e., the physical elements, directly influence the experience. Interviewee BK acknowledged that an additional atmospheric in the form of a sign would have helped them when this touch point still had a critical impact on their

experience, thereby showcasing the importance of the physical surroundings. A similar conclusion was made by interviewee JR - a commuter - who acknowledged that whilst they find the signage sufficient, this was not the case for a fellow rider - an infrequent rider. Bitner (1992) states that the servicescape can facilitate or hinder the achievement of goals, and building on this is the argument of Prior and Marcos-Cuevas (2016), who state that actors experience value co-destruction through goal prevention. Thus, it can be reasoned that the servicescape directly impacts the value process and subsequently causes changes in well-being by hindering or enabling the actors' achievement of goals.

Meeting the shortcoming of the Gentile et al. (2007) framework regarding the impact of previous experiences, the Lemon and Verhoef (2016) touch point typology acknowledges the presence of **customer-owned touch points** and their effect on the experience. Customer-owned touch points are defined as *“customer actions that are part of the overall customer experience but that the firm, its partners, or others do not influence or control”* (Lemon & Verhoef, 2016, p. 78), and through this, the effect of an interviewee comparing their experiences to their previous experience is arguably addressed. Thus, whilst the Lemon and Verhoef (2016) touch point typology allows for a holistic understanding of what impacts the customer experience, the Gentile et al. (2007) framework complements this by shedding light on the components contributing to a specific experience, albeit insufficiently, as displayed by the findings of this paper.

Additionally, it can be reasoned that the majority of atmospherics (Bitner, 1992), such as the design of the train and stations, are **brand-owned touch points** as they are in control of the company (Lemon & Verhoef, 2016). Nonetheless, through the findings of the paper, the interviewees perceive the same atmospherics differently, and, thus, have contrasting experiences. This is further in line with the argument of Järvi et al. (2018), who highlight that different actors will have different perceptions. In the context of the Metro stations cf. 5.6.3. Station Design, it is acknowledged by four interviewees that this specific servicescape is designed in a way that is perceived as positive due to its openness. Again, the perception varies significantly between individuals, as two interviewees contrastingly argue that the stations are small and feel crowded in their view. Nonetheless, while the atmospherics might assist in pinpointing the aspects that cause individuals to perceive the experience differently within the servicescape, it does not address why this difference in perception occurs. Thus, for a deep understanding of the value process outcome, it can be reasoned that the insights regarding the components creating a customer experience, as proposed by Gentile et al. (2007), are beneficial.

## 6.2 Determining the Role of Resources

Resources were early on acknowledged to impact value processes (Vargo & Lusch, 2004) and they are still argued to be a key driver of the processes' outcome (Bocconcelli et al., 2020). As the research question of this paper is concerned with how the utilization of resources in value processes impacts well-being, the following section discusses the role of resources in relation to the outcome of the value process.

Bocconcelli et al. (2020) argue that value is phenomenologically experienced as a result of actors integrating their resources. Here, it is important to point out the shift in terminology as referring to *actors*, as this illustrates the development in literature as proposed by Vargo and Lusch (2008). In the preceding section, the customer experience literature was criticized for its dyadic customer-company nature. Thus, by adopting the inclusive term 'actor' for the remainder of the analysis, it is possible to deepen the understanding of the reasons for the previously presented individual experiences.

There are numerous ways of approaching and viewing resources, which ultimately impact how one understands the role they play and the impact they have, cf. 2.1.3. Role of Resources. This research embraced the resource typology proposed by Plé (2016) and the resource misintegration typology brought forward by Laud et al. (2019) to analyze the interviewees' accounts. Both typologies emerged from the recent introduction of the value co-destruction concept, and thus, allow for a deeper understanding of the possible outcomes of service exchanges. Thus, to start exploring how the utilization of actors' resources in value processes impact the well-being within a service ecosystem, and thereby answer the research question of this paper, the previously presented findings are analyzed in relation to these typologies. To further understand how the utilization of resources impacts value processes and consequently well-being, the typologies are also put into context of the literature on value co-creation and value co-destruction.

### 6.2.1 Identifying the Roots of the Value Process Outcomes

Both Laud et al. (2019) and Plé (2016) argue that resource integration is what makes actors become part of service systems and, thereby, what enables them to co-create value. Additionally, they also highlight that resource misintegration ultimately leads to the co-destruction of value and that both value processes impact the actors' well-being. Several examples of these reasonings can be identified throughout the interviewees' accounts, where the consequences of said integration or misintegration are shown. A situation in which the nature of the resource and its following misintegration led to value co-destruction can be



identified in the search for information regarding the direction of the trains in the new circular Metro line, as expressed by several interviewees. BK, EG, EJ, and IL all stated that they have to consult the station overview and count how many stations separate them from their destination for each of the two directions. Consequently, EG stated the following.

*"(...) I really struggled with the new Ring when it first opened, so I had to stand there looking like a complete melon for about two minutes, working out what was going on. So that was very, very confusing. I found that quite... I don't know why I found it confusing?" – EG*

In this instance, the struggle and feeling of confusion represent the co-destroyed nature of value as it decreased the actors' well-being. Through applying the same resource-related typologies as previously to understand the reason for this outcome, we argue that the co-destruction results from the **lack of a resource to integrate** (Laud et al., 2019) which in this case is the **customer ability resource** (Plé, 2016). Here, the customer ability refers to the extent to which EG believed they had the knowledge on how to get to their destination the quickest way, which was expressed by the interviewee themselves as being limited in the beginning, subsequently illustrating the lack of a resource to integrate.

Another example of co-destruction of value can be found in the context of operational issues brought up by interviewee ND. As illustrated in the following quote, there was an expressed frustration regarding the lack of communication about when scheduled maintenance is due to occur.

*"But what I wish is that they communicate better is when there's maintenance. It's not always as well communicated, sometimes it says so on the signs, but then it's not entirely accurate or yeah, oftentimes maybe it would be nice if even Rejseplanen has like an overview. I don't know if they have that, of like maintenance coming up in the next few weeks, but yeah, I don't.. I have to say, I also don't specifically look for it. So that's also maybe my bad." – ND*

In this example, it is the lack of **informational resources** (Plé, 2016) that causes value co-destruction to occur. Whilst the analyzed data does not allow for the claim to be made regarding whether this resource misintegration by the Metro is *accidental or deliberate* (Laud et al. 2019), the outcome nonetheless ends up being a co-destruction of value. This is defined as the decline in well-being (Plé & Chumpitaz-Cáceres, 2010), and in this case, interviewee ND experiences it through emotional costs, also described as net deficits by Prior and Marcos-Cuevas (2016). This quote exemplifies how the different actors' (in this case interviewee NP and the Metro) utilization of resources impacts their respective value processes and how this ultimately affects all actors' well-being.

Through the comment of interviewee ND, one can find that they also acknowledge the nonlinear nature of value processes as proposed by Vargo and Lusch (2008), as ND understands that they also have a role in the value process. By pointing out that there might be information available, and that ND themselves did not look for it, it implies an **unwillingness to integrate resources** (Laud et al. 2019), meaning the actor, in this case, ND deliberately withheld their resources by not seeking information that could provide value, and thereby adding to the value co-destruction outcome. From this, it can be argued that the actor also takes responsibility for their part in the co-destruction of value, and their consequent decrease in well-being. However, Anderson et al. (2011) point out that information asymmetry often characterizes service exchanges and that this asymmetry will impact the actors' well-being. In this case, it can be reasoned that the Metro has the information regarding when and where scheduled maintenance will take place, yet fails to sufficiently share this information with ND, thereby creating an information asymmetry in the service exchange. By the logic of Transformative Service Research (TSR) with its end goal of improving actors' well-being, Anderson et al. (2011) argue that service providers bear responsibility for ensuring that an individual's well-being is considered. In this situation, this would mean that the Metro would take responsibility for providing sufficient information as the lack thereof has a direct negative impact on actors, resulting in value co-destruction. However, the impact of information asymmetry amongst actors is missing from the discussion leading up to the typologies of both Plé (2016) and Laud et al. (2019), and instead, this insight was brought forward by the emerging field of TSR as discussed by Anderson et al. (2011). Hence, this further illustrates the need for utilizing the logics of SDL and TSR in combination, as suggested by Kuppelwieser and Finsterwalder (2016).

Additionally, whether the failure to share information is accidental or deliberate is argued by Plé and Chumpitaz Cáceres (2010) to be vital to clarify, as this impacts what the actor can do in order to overcome the negative outcome. The Metro might think it is successfully integrating its **informational resources** (Plé, 2016) by having the maintenance information available, yet if the location of this information is not where the riders naturally would look for it, it implies an **accidental misunderstanding on how to integrate resources** (Laud et al. 2019).

The formerly discussed situations by interviewee EG and ND represent two arguably straightforward examples of how the actors' utilization of resources impacted the value processes and consequently the actors' well-being. However, as identified in the findings, there are several situations and contexts that provide less clear insight. An example of a more complex value process can be identified in the account of interviewee SN, who pointed out that seeing a large group of people at the platform can be perceived as an informational cue

that something is likely wrong with the Metro. The following answer was given after being asked how they find out about operational issues.

*“Oh, you just go there [platform at the Metro station], you see a huge crowd of people, and then you’re like, oh no..” – SN*

However, Plé (2016, p. 156) defines an **informational resource** as *“information that customers provide to the firm or employee.”* Nonetheless, it is argued that the Plé (2016) resource typology is limited by the dyadic customer-company perspective. In the example of SN, it is the customer who derives information rather than provides it, and the company itself plays no role in this specific value process. Thus, by applying the more inclusive term ‘actor’, one could reason that an information resource is the information provided by one actor to another. In this quote, it can, thus, be identified that an actor, i.e., the people in the crowd, arguably unknowingly integrates an informational resource to the value process simply by being there. This insight brings us to the question of whether an actor can, in fact, also be a resource in themselves. Lusch and Vargo (2014, p. 121) do indeed define resources as *“anything, tangible or intangible, internal or external, operand or operant, an actor can draw on for increased viability,”* which leaves the nature of resources open for broad interpretation. A previously pointed out shortcoming of the Plé (2016) resource typology is that it is limited by its terminology as it refers to ‘customers’ rather than ‘actors.’ This is despite the fact that the typology emerged from a literature review of the SDL, which argued one should refrain from referring to predetermined roles, such as ‘customers’ (Vargo & Lusch, 2008). Due to its limitation, the Plé (2016) typology does not take into account resources possibly available in service exchanges that do not stem from the dyadic customer-company interaction. Thus, through the presented findings, we argue that actors can also be resources in themselves. By including this resource type in the typology of Plé (2016), it would serve as a first step to overcome the previously pointed out shortcoming.

## 6.2.2 Expanding on the Nature of Interaction

A value process similar to that of interviewee SN with the crowd of people at the metro station was identified in the interviewees’ discussions on safety on the Metro, cf. 5.7.4. Presence of Others, where interviewee BK and JR attributed feeling safe to the presence of others. This example showcases how value processes can occur without any direct actor interaction actually taking place, yet Plé and Chumpitaz Cáceres (2010, p. 431, stress added) argue that value co-destruction is *“an **interactional** process between service systems that result in a decline in at least one of the systems.”* These reflections bring attention to the diverse nature

of interactions, and as interactions are at the heart of understanding the consequent value processes, these provide an additional aspect of consideration.

The current literature offers little insight into if an interaction means that two actors have to engage directly, or if it is enough, as illustrated by these findings, that the actors are in proximity of each other to impact the respective value processes. One may also raise the question of whether interactions are limited to humans, or if interactions with physical atmospherics, as discussed through touch points, also are to be regarded as an actor interaction. If so, are these interactions equal in their effect on the value process, and how are they perceived by the actors? As argued by the literature presented, value processes occur when actors interact (Vargo et al., 2020; Åkesson, 2014), but based on the findings, we argue that they do not need to interact directly. For instance, an actor having issues buying tickets via an app co-destroys value as illustrated by interviewee IL, yet no other actor was directly present.

*“It's always like malfunctions sometimes and it's like it crashes. And I know there's.. There's another app for the Metro like DOT or something.” – IL*

An actor, as argued by Vargo and Lusch (2008), is anyone who participates in a market exchange, which again leaves a broad room for interpretation of the nature of an actor. Consequently, whilst these considerations raise more questions than answers, it points to a need of clarifying the scope of the various terms frequently used in the literature on resources and value processes.

Per the argument of Vargo and Lusch (2011), all participants in an exchange are actors who voluntarily integrate resources to co-create value. Yet, in the following quote by BK, the voluntary nature can be questioned as the actors (the fellow riders) are unawarely integrating the resource of their presence to the co-creation of value.

*“I like that I at least always.. It's kind of like an open space, so I have like a clear overview of the people who are sitting there and it's like.. I'm almost always in.. Like I'm always never alone. It's always like with other passengers. And then I think that gives me a sense of safety.” – BK*

Adding to this, Plé (2016) proposes that **role size**, **role awareness**, and **role clarity** are three types of resources that can be integrated to co-create value. Here, it can be argued that the other riders are unaware of the role they play in the value process. However, as they are unaware of the ongoing process, they are also not likely to derive any value from the said process, thereby making it impossible for them to meet the expectation of any role. This poses

the question of what the impact would be if they had clarity regarding the role they take on, as well as its potential impact (role size). This further brings up the aspect of to which extent actors are aware of the resources disposable to them to integrate, and its effect on the value processes.

Lastly, Plé (2017) posed the question of whether the same interaction can lead to some value being co-created whilst some co-destroyed. As speculatively possible per the argument of Cabbidu et al. (2019), who outline the multiform of value and attribute it to an actor's economic, cultural, social, and symbolic capital, the previous quote by SN regarding the presence of others does indeed provide insight into how the same situation can result in both co-creation and co-destruction. As discussed, the value was co-created in this situation as information was being provided through the presence of others. However, the value was also co-destroyed through their presence as this meant there was a fault with the functionality of the Metro, leading to SN being prevented from realizing their goal of transporting themselves and, thus, experience co-destruction (Prior & Marcos-Cuevas, 2016). The informational and functional value proposed by this example is, however, not acknowledged in Cabbidu et al.'s (2019) proposal of value. Instead, by embracing the definition of value as proposed by Vargo and Lusch (2018, p 740), value is regarded as "*an emergent, positively or negatively valenced change in the well-being or viability of a particular system/actor.*" This view of value ultimately allows for a more inclusive and consequently broader understanding of situations where actors' utilization of resources has impacted the value process.

## 6.3 Impact on the Service Ecosystem

In order to enable the processes of value co-creation, a robust and resilient service ecosystem must exist (Frow et al., 2019). Hence, to comprehend the effect that the previously discussed interactions between the riders have on the service ecosystem, one must establish the particular nature of the Copenhagen Metro service ecosystem. Ultimately, by understanding the emergence of the service ecosystem, it allows for an analysis of the character of value processes between the actors and their ultimate impact on collective well-being.

### 6.3.1 The Unsteady Nature of the Service Ecosystem

Previously, the aforementioned ecosystem has been visualized as consisting of three levels of aggregation – micro, meso, and macro (Chandler & Vargo, 2011; Van Heuvelen, 2018), cf. 2.1.4. The Complex Networks. By dissecting the service ecosystem into three mutually dependent levels, the self-adjusting and self-contained nature of the service ecosystem becomes apparent as it is in a constant state of development and reformation (Vargo & Akaka,

2012; Vargo & Lusch, 2016). Subsequently, Taillard et al. (2016) argue that any service ecosystem must emerge as a result of a worldview that is shared by the service ecosystem's actors. Vargo and Lusch (2016) provide a concurring account in the SDL literature, positing that a service ecosystem maintains institutions and institutional arrangements that serve as the social norms for the actors' behavior and actions.

However, when turning attention to the data collected and presented, cf. 5. Findings, it is of paramount importance to subject the Copenhagen Metro service ecosystem to scrutiny when attempting to understand the shared worldview of this ecosystem. As previously argued, the Copenhagen Metro served nearly 64 million passengers in 2020 (Metro, 2021c). Hence, it is argued that the Metro service ecosystem is highly fluid and in constant flux as the actors within the ecosystem engage and subsequently disengage from it, i.e., the riders are argued to be part of the service ecosystem only when they are taking the Metro. Thereby, it is impossible to identify the same level of stability within the Metro service ecosystem and among the ecosystem's actors as put forward in similar research (e.g., Frow et al., 2019; Leo et al., 2019; Taillard et al., 2016). To exemplify, the paper put forward by Taillard et al. (2016) focuses on understanding the service ecosystem within the context of a start-up in which the service-exchanging actors assume a particular role that is established by their knowledge and skills. However, when analyzing the findings brought forward by this research, it is claimed that the roles of the Copenhagen Metro actors are ever-changing and dependent on a multitude of factors such as their previous experiences with the Metro, individual goals and needs, and external influences. The data showcased that the relationships between the actors are distant and that a vast majority do not wish to seek to engage with others, as exemplified by the following statement, cf. 5.7.6. Rider Interaction & Avoidance.

*"I feel like you don't want to interact with people on public transportation in general. I feel like the positive side of public transportation is, you know, when you're not in control, so you can just not think about anything and just like enjoy the ride." – IL*

One must, undoubtedly, again pose the question as to what constitutes an interaction in the minds of the research participants as it is likely to be interpreted differently. However, Taillard et al. (2016, p. 2972) argue that *"individual actors (at the micro level) actively strive to collaborate with others to create value, and these collaborations may, under the right conditions, allow service ecosystems to emerge across the meso and macro levels and to remain viable."* Similarly, Taillard et al. (2016) claim that for a service ecosystem to emerge, its actors must have shared intentions that rely on the actors' interactions with each other. Nonetheless, it ought to be acknowledged that the shared intentions do not directly translate into the actors sharing the same goal. Instead, the individual actors are bound to pursue their

individual goals yet negotiate with each other how to behave and act in a way that is beneficial for the whole service ecosystem. However, the interactions must take on a communicative nature as *“without communication, actors have no way to participate in the shared intentions”* (Taillard et al., 2016, p. 2977).

Nevertheless, the data collected in this research fails to denote a profound wish and active striving among the interviewees to interact with each other when taking the Metro. Quite the contrary, there is an extensive endeavor among the interviewees to avoid interactions with others, as denoted by interviewee JR who argued they would break off any prolonged interaction on the Metro with a stranger.

*“(...) if the few times people have wanted to take a longer chat, I don’t, I haven’t really felt like it and I’ve tried to shut it down or got up and gotten off the train.” – JR*

The purpose of this paper is to answer the calls by Ostrom et al. (2010) and Anderson et al. (2013) for further research on the impact of public transportation and infrastructure on collective well-being. However, as formerly argued, the Copenhagen Metro service ecosystem is relatively unsteady in comparison to prior research on service ecosystems. Therefore, the SDL literature, spearheaded by Vargo and Lusch (2004, 2011, 2016), and subsequent service ecosystem literature subscribing to the SDL tenets (e.g., Taillard et al., 2016), pose an oversimplification of the highly contextual nature of the service ecosystem. Subsequently, the data from this research allows for the argument to be made that current conceptualizations of service ecosystems, albeit accounting for their self-adjusting nature (Vargo & Lusch, 2016), fall short of explicating the role of proximity in the relationships between the ecosystem’s actors. However, this is not to say that the Copenhagen Metro does not constitute a functioning service ecosystem. It is argued that the Metro has a multilayered service ecosystem, but as prior research focused on different areas of interest, the conceptualizations do not suffice for the particular nature of the Metro service ecosystem.

### **6.3.2 Searching for the Shared Worldview**

Frow et al. (2019) argue that the shared worldview impacts the service ecosystem’s well-being. However, the lack of shared intentions among the Copenhagen Metro service ecosystem actors poses a challenge to the service ecosystem literature and, hence, by extension, the well-being literature. This research aims to understand how value processes impact well-being within a service ecosystem, and we argue that the Copenhagen Metro embodies an emergent service ecosystem that transcends the ecosystem literature due to its loose nature. However, Gummesson and Mele (2010) state that every actor brings a unique combination of resources into the service exchange, and through matching their resources

with other actors, a service ecosystem may emerge. Yet, the actors contribute to the emergence and viability of the service ecosystem by their individual uniqueness. Thus, the argument by Gummesson and Mele (2010) finds corroboration in Taillard et al.'s (2016) argument stating that the service ecosystem actors must not always share their goals and retain some of their individualist, ego-driven intentions. Our data support these arguments to the extent where the interviewees displayed concern for their individual goal attainment and, simultaneously, a moderate consideration for other riders taking the Metro at the same time.

*“I can remember when I had very small children and I had a pram, it would be very frustrating when the lifts weren't working, which could happen quite regularly, because then there's no way of getting up there. And I do wonder how people in wheelchairs manage when that happens.” – EG*

Nonetheless, the rift between individual and shared intentions has been previously noted in the service ecosystem literature (Taillard et al., 2016). Hence, the role of intentions remains disputed in the ecosystem emergence processes. To that end, Sawyer (2005) offers a social emergence paradigm adopted by Taillard et al. (2016), cf. 2.1.4.1.1. The Emergence of Service Ecosystems. Therefore, the findings made in this paper ought to be mirrored against Sawyer's paradigm in an attempt to establish whether it sufficiently explains the emergence of the Copenhagen Metro service ecosystem. The application onto the case is visualized in *Figure 9* below. Sawyer (2005) argues that there are five levels of social emergence, i.e., Level A through Level E, which can become noticeable across the micro, meso, and macro levels of a service ecosystem (Taillard et al., 2016).

The **individual level** (Level A) and **interaction level** (Level B) shall take form on the micro level within the ecosystem. The individual level is embodied through the actors' intentions, value perceptions, and attitudes. Herein, the social emergence paradigm finds corroboration in the data collected in this paper as the interviewees showcased a significant level of individuality in their narratives. However, the interaction level on which conversations, negotiations, and meetings should occur among the various actors is cumbersome to identify in the collected data, as described in the preceding paragraphs. Yet, the researchers ought to acknowledge that the interviewees did interact with the Metro's staff. Nonetheless, such an interaction was in numerous instances not voluntary, e.g., ticket controls. What is more, the data showed that the interviewees avoid interactions with each other. Hence, we argue that the interaction level does not exist prominently in the Copenhagen Metro service ecosystem. The **ephemeral emergents** (Level C) embody the level on which the actors' roles are defined. However, as previously argued in cf. 6.2.2. Expanding on the Nature of Interactions, the studied service ecosystem does not provide the actors with clearly defined roles. Nonetheless, there are general actor roles such as Metro employees and riders. By the same virtue, we



argue that there are sub-roles for the riders that are dependent on each rider's profile, e.g., commuters, occasional users, foreign visitors, etc. Sawyer's (2005) social emergence paradigm argues that Level D is constituted by **stable emergents** such as shared intentions, norms, routines, and shared practices. Even though Sawyer (2005) and Taillard et al. (2016) argue that this is the more formalized level that predominantly emerges from the lower levels, the data collected in this research does not corroborate their claims. In contrast, we argue that the Copenhagen Metro service ecosystem's uniqueness and particularity cause the stable emergents to become the prominent constituent of the service ecosystem. Notably, the role of shared practices (Bourdieu, 1977) must not be overlooked in this context. As previously stated, the studied service ecosystem is complex and includes millions of relevant actors. Thus, it is impossible for the ecosystem to emerge through conversations and meetings, as Taillard et al. (2016) argued. Instead, we argue that the communication is replaced by the shared practices exhibited by the service ecosystem riders. The Copenhagen Metro is highly formalized in terms of the routines and norms that are accepted by the riders, and these, in turn, shape the practices that are ultimately adopted by other riders. Lastly, the **social structure** embodies Level E in Sawyer's (2005) paradigm. On this level, the institutions and their arrangement, as well as explicit laws and regulations are observable. Hence, the social structures embody the macro level of the Copenhagen Metro service ecosystem.

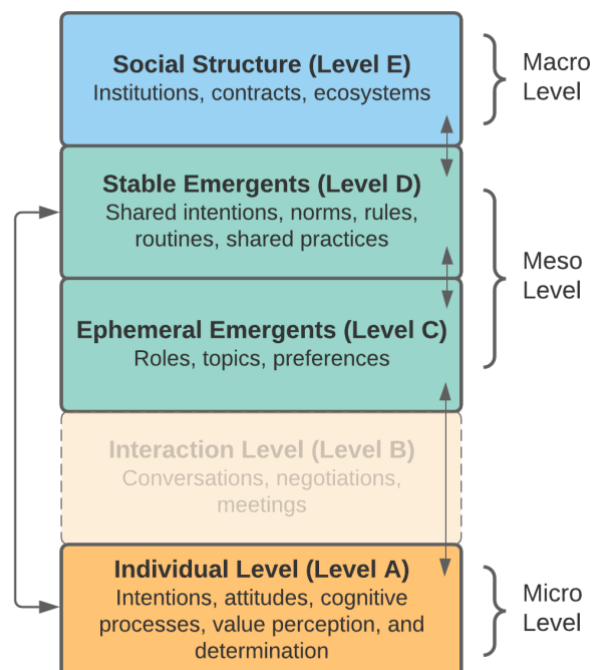


Figure 9 - The Social Emergence Paradigm Applied on the Copenhagen Metro Case, adopted from Sawyer (2005) and Taillard et al. (2016), edited, own creation.

Ultimately, the data showcased in this paper challenges Taillard et al.'s (2016) notion of the communicative emergence of service ecosystems. Oppositely, we argue that the shared worldview of the Copenhagen Metro service ecosystem can be found in the shared practices, and it is the practices that allow for the service ecosystem to operate and to remain viable.

However, the current academic literature does not offer such a profound and rigorous understanding of service ecosystems that contain vast numbers of actors in which the nature of the service implies that there the relationship distance between the actors is uneven, eventually resulting in the actors avoiding mutual contact and interactions. Nevertheless, we concur with Taillard et al. (2016) that the various levels of service ecosystem aggregation and social emergence mutually influence each other and do not exist in a vacuum. Therefore, we argue that the stable emergents on the meso level heavily impact the individual level on the micro level and, hence, give rise to the Copenhagen Metro service ecosystem.

### **6.3.3 Impact of External Influences on Service Ecosystem Well-Being**

Having identified that the shared worldview of the Copenhagen Metro service ecosystem lies within the shared practices (Bourdieu, 1977), Taillard et al.'s (2016) notion of ecosystem emergence is challenged. Therefore, it is of importance to investigate the role of external influences on the emergence of the service ecosystem and, ultimately, its impact on collective ecosystem well-being (Frow et al., 2019). It is argued that there are supportive and disruptive factors impacting the service ecosystem's well-being (Frow et al., 2019), cf. 2.1.4. The Complex Networks. However, Frow et al.'s (2019) conceptualization of service ecosystem well-being subscribes to Taillard et al. (2016) and, hence, the paper also utilizes a close-knit service ecosystem in which the actors are closely bound to each other and have assigned roles - two hospital wards with doctors, nurses, and patients (Frow et al., 2019). Hence, the service ecosystem presumes that there are set roles the actors take on. Therefore, Frow et al. (2019) did not consider the criticism of Anderson et al. (2013), who argued that such service ecosystems are influenced by an information asymmetry which leads to an assignment of roles and may, eventually, lead to value co-destruction, cf. 2.2.1. Transformative Service Research.

Nevertheless, the Copenhagen Metro system is loose, and the actors do not always have clearly assigned roles or do not possess a clear understanding of their role, as argued in 6.2.2. Expanding on the Nature of Interactions. As formerly presented, a service ecosystem's well-being may be supported and improved by integrating new resources, positive environmental impacts, and keystone actors (Frow et al., 2019). Through the data collected in this research, we agree with Frow et al. (2019) that new resources may strongly improve the service

ecosystem's well-being. The data showed that by expanding the Metro network in Copenhagen with the M3 and M4 Lines, i.e., a physical resource (Plé, 2016), the interviewees can more easily travel around Copenhagen as the various neighborhoods are better connected. Furthermore, the data demonstrated that the servicescape of the Copenhagen Metro (Bitner, 1992), which is argued to act as a resource, exerts a positive impact on the service ecosystem's actors, ultimately leading to a more resilient ecosystem with increased well-being.

*"I like that it's quite modern, it's quite a contemporary modern outlook. And as I said, that also, you know, if you have a if you have a metro station that looks like it's been through something, then I'm also less likely to feel comfortable (...)" – ND*

Tombs and McColl-Kennedy (2003) argue that contextual factors impact the perception of the environment. This claim is supported by our findings, as they show that the individual rider profile impacts their perception of the servicescape. This research, however, does not find support in its data for the positive role of the external impacts and the keystone actors, who should act as leaders and activists for others, as posited by Frow et al. (2019). In particular, the actors identified in this research did not showcase any awareness or knowledge of such keystone actors. We argue that the lack thereof in the Copenhagen Metro service ecosystem is caused by its loose nature and the distance in relationships between the 64 million actors.

On the other hand, Frow et al. (2019) state that the disruptive factors on the service ecosystem's well-being are stressors, environmental jolts, and internal co-destructive activities. We maintain that the data showcased various minor stressors and rather severe environmental jolts to the service ecosystem. Within the Copenhagen Metro service ecosystem, there are external third parties that may pose a risk to the service ecosystem's well-being. These parties are, among others, Rejseplanen, Rejsekort, DSB, Movia, Skånetrafiken. The interviewees inherently described their experiences with the third-party service providers as if they were directly connected with the Copenhagen Metro. It ought to be acknowledged that such interactions were frequently described in terms of frustration, confusion, and annoyance on the interviewees' part. Hence, it is argued that the third parties impact well-being as stressors and exercise an influence on the service ecosystem. What is more, interviewee EG displayed an awareness that they are more likely to remember these negative experiences with the Copenhagen Metro, and by extension, the third-party providers, as opposed to positive experiences.

*"It is a bit sad maybe for the Metro, but it's one of those things where you don't notice it when it works well. But it really stands out when it doesn't." – EG*

Additionally, the interviewees described several environmental jolts (Frow et al., 2019). These were mainly attributed to the maintenance in Copenhagen Metro. The interviewees described insufficient communication from the Metro's side, which negatively impacted their customer experience, cf. 5.5.3. Communication. It was described that the interviewees had to figure out on their own how to complete their journey in light of the maintenance closures. We argue that such maintenance does not only impact the individual on the micro level, but also the meso and macro levels as a traffic disturbance in the Metro will impact other travelers and the operations of other public transit providers in Copenhagen under DOT. Therefore, we concur with Frow et al. (2019) that these environmental jolts pose a significant challenge to the service ecosystem's well-being across the levels. In line with Plé and Chumpitaz-Cáceres (2010) and Echeverri and Skálén (2011), Frow et al. (2019) posit that interactions between the service ecosystem's actors may lead to value co-destruction. Besides the interviewees' desire to avoid interactions and contact with other riders, the data also shows that interactions with the Metro staff that the interviewees described could have a co-destructive impact on the interviewees.

*“That's when it kind of starting to fall apart for me. So from being an OK experience [to get checked for the ticket], it like started to be laced with all sorts of anxiety. You know, the actual trip 'oh, am I going to get checked? Is this guy going to know that I am actually legally covered?” – SN*

Finally, we contend that in the Frow et al. (2019) conceptualization of service ecosystem well-being enriches the academic understanding of the emergence of service ecosystems and their well-being. However, it cannot provide a satisfactory account that could be used to analyze and fully account for a public transportation service ecosystem.

## 6.4 Impact on Well-Being

This paper is concerned with exploring how the utilization of actors' resources in value processes impacts the well-being of a service ecosystem. Thus, in an attempt to understand how well-being demonstrates itself in the context of Copenhagen Metro, the framework put forward by Leo et al. (2019) was introduced, cf. 2.2.1.2. Service Ecosystem Well-Being. The framework introduces ten domains of well-being that find expression across the micro, meso, and macro levels of service ecosystem aggregation. Furthermore, the framework argues that even though these domains demonstrate themselves on a particular level of aggregation, they do mutually impact each other and cannot be seen in a vacuum. Consequently, Leo et al. (2019) acknowledge that the domains are not of equal importance to the individual actor within a service ecosystem. Hence, they propound the belief that individual well-being and goals, that the actor tries to achieve, influence the attainment of collective service ecosystem well-being. Our data shows support for this claim as the interviewees showcased various needs

and tried to achieve different goals based on their rider profile. Hence, we concur with Leo et al. (2019) that the micro level well-being cannot be ignored.

However, Leo et al. (2019, p. 780) argue that *“each domain is important for collective well-being to exist, because these domains are not mutually exclusive but rather interlinked together.”* Herein, we offer a point of criticism similar to the preceding argumentation. Just like Frow et al. (2019) and Taillard et al. (2016), Leo et al. (2019) defaulted in their conceptualization to analyzing close-knit service ecosystems with clearly defined roles in the service exchange – a hospital and supermarket. What is more, in their primary research within the context of a hospital, nine out of ten participants in their research were hospital employees and only was a patient. The secondary research from a supermarket employed nine participants, among which only two were customers, and one was a governmental employee. Hence, we argue that Leo et al.’s (2019) conceptualization is based on service ecosystems and research in which there is a high role awareness and clarity among the participants (Plé, 2016). Nevertheless, Leo et al. (2019) are aware of the limitations posed by their research as it studies a particular service ecosystem and sample. Based on the findings of this paper, it is hereby contrastingly argued that the Copenhagen Metro ecosystem consists of actors with low role awareness and clarity. Hence, to shed light on the various well-being domains that contribute to collective well-being within the Copenhagen Metro service ecosystem, the various claims made by Leo et al. (2019) shall be critically analyzed to assess the conceptualization’s validity in a broad service ecosystem.

Among the macro level domains of well-being, **strategic well-being** demonstrates itself when the service ecosystem provides its actors with new opportunities and goals that provide them with individual and ultimately collective well-being (Leo et al., 2019). Interviewees BK and NP expressed that by growing the Metro network, the whole DOT system in Copenhagen has improved and that the interviewees can better get to their destination, cf. 5.3.1. Metro Network. Our data, however, does not offer further strong support for this form of well-being. **Governance well-being** is showcased when the service ecosystem provides procedures and policies, i.e., the institutions and their arrangements (Leo et al., 2019; Vargo & Lusch, 2016). We concur that the institutions from the macro level, as established through DOT, have promulgated onto the meso and micro levels, where they subsequently demonstrated through shared practices in the actors’ behavior. **Leadership well-being** exists through actors who support the individuals and the service ecosystem (Leo et al., 2019). As previously argued in connection to Frow et al.’s (2019) framework, our data does not find any support for this well-being domain as the interviewees did not describe any form of leadership among the Copenhagen Metro service ecosystem actors. Hence, it ought to be reevaluated whether this

form of well-being domain applies to all service ecosystems. The fourth form of macro level well-being is **resource well-being** that is demonstrated when the service ecosystem has resources which the actors can integrate with in order to fulfill their needs and goals (Leo et al., 2019). The data from our research points towards a highly individualistic nature when it comes to resource integration. We argue that the service ecosystem actors have various needs and, thus, integrate and seek different resources. However, interviewees BK, EJ, ND, NP, SN, and VG collectively evaluated the Metro's physical design positively, and as such, allows them to accomplish their goals, cf. 5.6.3. Station Design. Hence, the prominent role of the servicescape (Bitner, 1992) must be acknowledged in the service exchange as an impactor of the resource integration process. On the other hand, third-party providers such as Rejseplanen and Rejsekort also impact the service ecosystem's well-being. It was argued that Rejseplanen offers unreasonable journey plans, cf. 5.3.10. Rejseplanen, and that Rejsekort may be hard to use for novice users, cf. 5.6.1. Check-in & Check-out. Hence, the third-party providers are argued to profoundly impact the resource well-being, as explicated through interviewee SN's account.

*“So for my regular commute and for anything else, I have to use the Rejsekort. And I had very poor experiences with that, mainly because of myself, because I'm not used to using it. So I forget to freaking check in, I forget to check out. And that hasn't been.. It hasn't been nice.” – SN*

On the meso level of aggregation are further four well-being domains (Leo et al., 2019). Our data shows an overall lack of **community, social, and collaborative well-being** domains in the Copenhagen Metro service ecosystem. As previously demonstrated, the actors did not seek contact and interactions with each other. Community well-being is shown when the actors feel part of a more extensive network of actors, i.e., a community (Leo et al., 2019). There is no collective community that the interviewees identified. However, one may argue that the rider profile replaces an overall community. Hence, to exemplify, the commuters may be seen as part of a given community and ultimately stimulate community well-being. Nonetheless, the interviewees did not account for such sub-communities within the service ecosystem. What is more, social well-being exists when actors have social connections with each other and the service ecosystem (Leo et al., 2019). By the same virtue as in the case of community well-being, our data fails to find support for a robust social connection among the Metro service ecosystem actors. Not only among the riders themselves, but the interviewees also described a neutral relationship with Metro staff, as argued by interviewees BK, EJ, IL, JR, ND, and NP to be the case during a ticket control, cf. 5.7.2. Ticket Control. Thus, we argue that the Copenhagen Metro service ecosystem does not stimulate mutual bonding due to the distance in relationships between the actors. Moreover, collaborative well-being comes to expression

when the service ecosystem actors share functioning relationships with each other (Leo et al., 2019). Yet, as already stated, our data does not ultimately show such collaboration, and the interviewees instead focused on more ego-driven and individualistic goal attainment. Therefore, we argue that the lack of these three well-being domains may pose a challenge to Copenhagen Metro as there is a potential that the service exchanges between the actors will be perceived as mutually destructive, i.e., co-destructive (Plé & Chumpitaz-Cáceres, 2010), and will, hence lead to an extensive decrease in the service ecosystem's well-being (Frow et al., 2019).

The final well-being domain on the meso level is **cultural well-being** (Leo et al., 2019, p. 779) defined as occurring when the service ecosystem *“provides actors with strongly shared understanding of the rules, norms of exchange, practices, beliefs and values that offer a guiding framework for resource exchange.”* The research and data from this research find extensive support for this well-being domain. The interviewees displayed awareness and contentment with the various rules, norms, and practices within the service ecosystem. Additionally, interviewees also expressed that if a fellow rider, i.e., another actor, acts in a way that is not encompassed in the shared practices, it leads to a co-destruction for the interviewee. Interviewees IL and JR agreed that the passengers on the Metro are expected to stick to themselves and not interact too much. JR expanded and underlined the importance thereof through the following statement.

*“(...) if the few times people have wanted to take a longer chat, I don't, I haven't really felt like it and I've tried to shut it down or got up and gotten off the train” – JR*

The micro level of a service ecosystem is argued by Leo et al. (2019) to give rise to two further well-being domains. **Existential well-being** is argued to showcase itself when the service ecosystem's actors have a sense of purpose corresponding to their individual values (Leo et al., 2019). The interviewees expressed that they harbor preferences and attitudes towards the Metro and other means of transportation that fall under DOT. There was diversity in the data showcasing that the interviewees do not only take public transportation from a functional perspective but also consider their individual experience. However, the data does not provide support for the existence of a common sense of purpose within the service ecosystem, as identified by Leo et al. (2019). Lastly, **transformative well-being** exists when the actors can grow through learning. The data does not showcase that the Copenhagen Metro service ecosystem would offer such opportunities to its riders as the interviewees did not offer such accounts throughout the interviewing process. However, interviewee VG argued that they would wish to learn more about the Copenhagen Metro and the design choices made at the stations. This may, in turn, improve their perception of the Copenhagen Metro and the whole

system – ultimately leading to improved integration of resources with other actors and enhanced well-being.

*“Why is it that there are some balloons in some of the metro stations and is that for a reason? Is there reasoning behind it of the area that you're in? But that would be nice if there could be a bit of a storytelling there.” – VG*

Through the application of the ten well-being domains posited by Leo et al. (2019) onto the Copenhagen Metro case, we contend that while the domains merit recognition and can exist within a service ecosystem, the framework put forward by the authors is too restrictive in its premise. By arguing that all ten well-being domains must be present in any given service ecosystem, Leo et al. (2019) do not account for the variety and diversity in service ecosystems and, ultimately, their ever-changing and emergent nature (Frow et al., 2019). It was shown through this analysis that the framework does not fully account for the varying nature of service ecosystems, as was the case in the argumentation by Frow et al. (2019) and Taillard et al. (2016).



## 7. Discussion

The following section presents the theoretical implications of the paper, as well as the managerial implications. The paper's limitations are outlined, and the consequent suggestions for further research are presented.

### 7.1 Theoretical Implications

This study contributes to the holistic understanding of value processes, customer experience, well-being, and service ecosystems. To the best of the authors' knowledge, prior research tends to focus on these areas in a vacuum and, hence, this led to fragmented accounts, which resulted in providing a partial picture and a multiplicity of definitions. Ultimately, it ought to be acknowledged that there is no solidified framework that would unite these areas of academic inquiry. That is despite previous research underlining and stressing the importance of aggregating theory to gain a holistic understanding of the aforementioned phenomena. However, treating academia as separate streams of knowledge shows its shortcomings, which prevents us from gaining a practicable understanding of well-being. Thus, to counter such a shortcoming, this paper attempts to offer an analytical account by utilizing various theories and frameworks simultaneously to comprehend the complex nature of service-for-service exchanges in the context of the Copenhagen Metro service ecosystem.

Secondly, this paper answers calls by Ostrom et al. (2010) and Anderson et al. (2013) for further research on well-being in services and service ecosystems, particularly focusing on metropolitan service infrastructures. By utilizing the logics of Transformative Service Research (Anderson et al., 2013), this paper expands on the existing research in which TSR has been applied. In doing so, this case study adds to the theoretical understanding and conceptualization of the narrowly defined service ecosystem by shedding light on the importance of accounting for the size of the service ecosystem, i.e., the number of actors included in a service ecosystem. The findings and consequent analysis in this paper revealed that the emergence of a service ecosystem does not follow a one-fits-all process as it may seem from former research. Instead, this paper propagates the notion that the emergence of a broad service ecosystem may stem from shared practices that give rise to such an ecosystem instead of the assumed communicative emergence. Hence, this paper contributes by broadening the current understanding of service ecosystems by analyzing an ecosystem in which millions of actors do not have clearly defined roles. Their relationships and interdependencies are scattered and distant at best. What is more, this paper builds onto the service ecosystem literature, which is founded on studying the phenomenon within a hospital

context (Frow et al., 2019) and mixed research in a hospital and at a supermarket (Leo et al., 2019).

Furthermore, this paper enhances the conceptualization of service ecosystem well-being as posited by Leo et al. (2019). Based on the analytical findings, it is argued that the various well-being domains within a service ecosystem do neither always profoundly demonstrate themselves nor do they demonstrate themselves on the particular level of service ecosystem aggregation. Hence, by identifying the various well-being domains in the Copenhagen Metro service ecosystem and discussing their respective relevance, this research advances that the well-being typology by Leo et al. (2019) ought to act as an overarching guide that guides the analysis of the well-being processes within a service ecosystem. We maintain that the framework ought not to prescribe which well-being domain should be placed onto each level of service system aggregation. Instead, we propose the framework to be inclusive and allow for flexible use as Leo et al. (2019) themselves posit that there may be a spillover effect between the domains and that they impact each other across the service ecosystem.

Lastly, through the combined application of existing theories that have not previously been linked together, this paper analyzed the value processes related to customer experiences through a new perspective. By adopting the '*actor*' perspective introduced by the Service-dominant Logic (Vargo & Lusch, 2008), this paper was able to deepen the understanding of the complex nature in which value processes occur. Through this approach, it was found that it is not only the company that can offer a value proposition, and, thus, the paper was able to go beyond the customer-company dyad. Consequently, the resource framework of Plé (2016) and resource misintegration framework by Laud et al. (2019) came under scrutiny, as it was found that these operate within the boundaries of the dyad. This paper was consequently able to illustrate the limited applicability of the framework while also proposing a direction in which to continue building on these theories. Furthermore, the concepts of service ecosystems and well-being were also matched to the customer experience literature, and through the findings, it was further found to expand the understanding of the experiences' complex nature. Ultimately, the findings of this paper led to several crucial questions, which can, if answered, bring the broad and previously unlinked theories together in a way that can significantly contribute to the understanding of value processes, customer experience, well-being, and service ecosystems.

## 7.2 Managerial Implications

The findings of this paper also result in a number of managerial implications. Firstly, it was found that several interviewees had experienced value co-destruction due to the lack of information from the Metro. As one can argue it to be crucial for a company to prevent value co-destruction, this paper finds that it is of paramount importance to establish whether the actions causing value co-destruction are accidental or deliberate. From a managerial perspective, understanding the reasons why value was co-destroyed gives actionable insights into which measures would be appropriate in order to overcome it. However, this paper also found that the interviewees experience similar situations in a number of different ways. This further highlights the need for understanding the different customers, as what may co-create value for one customer, might co-destroy value for another. This is in line with the claims of Sandström et al. (2008), who argue that companies often struggle with understanding what provides value to their customers. Thus, by establishing the underlying mechanisms of the value processes and their consequent impact, it can be argued to enhance companies' understanding of their actions.

From a managerial point of view, companies must also consider the role of information asymmetry in service delivery. Insights from this research confirm the claims by Anderson et al. (2013) that in case of a profound information asymmetry, it is likely to lead to frustration and co-destruction of value between the actors who are involved in a service exchange, e.g., company-customer interactions. As highlighted, our data shows that customers strongly dislike being kept uninformed about any possible disruptions in the service delivery process. Arguably, in situations where the customer feels disadvantaged because they lack information about the service, their well-being is prone to decrease (Anderson et al., 2011). Companies and their managers must not only show consideration but also proactively address any information asymmetries that may negatively impact their customers. Therefore, service providers ought to consider the relationship between the company and its customers already when designing the service as it is the company that bears the ultimate responsibility for the customer's well-being (Anderson et al., 2011). Managers ought to be aware that the individual customer's well-being has a direct impact on the collective well-being within the service ecosystem. Ultimately, stimulating increased collective well-being will positively impact the actors within the service ecosystem and may lead to improving the service provider's business operations. Therefore, companies should proactively promote well-being within the service ecosystem that they are part of through clear communication with the ecosystem's actors, establishing understandable and mutually beneficial rules, monitoring the actors' behavior and interactions with fellow actors. Simultaneously, firms shall promote well-being by

acknowledging the importance of the physical space in which the service exchange takes place as it profoundly impacts the actors. By the same virtue, the staff-customer interactions remain of key importance and shall be taken into consideration when managers attempt to increase well-being within the service ecosystem.

Additionally, it was found that the interviewees do not only derive value from the value proposition of the company, and it was highlighted that factors such as other riders could impact the value processes of the interviewees. Thus, it is of importance for the company to understand the extent to which they can impact the value process and what lies outside of their power. This resonates with the arguments of Lemon and Verhoef (2016) as they argue that some touchpoints are not within the control of the company. Ultimately, this means that the company needs to understand and take into account that what the customer will derive value from will transcend the value proposition offered by them. Furthermore, the interviewees gave significant weight to their previous experience when assessing their experience with the Copenhagen Metro, which showcases the relative nature in which interviewees perceive their experience. Thus, in order for the Metro to ensure the well-being of the service ecosystem, these findings need to be accounted for.

Finally, this study showed that the Copenhagen Metro service ecosystem emerges around the shared practices that are adopted by its actors, i.e., the riders. Therefore, the way that the service of Copenhagen Metro is designed leads to the adoption of various shared practices between the ecosystem's actors. In other words, companies ought to be aware of the power that they wield in the service design process and must consciously adapt the service design so that it leads to the attainment of the customer's goal and to creating collective well-being.

### 7.3 Limitations

This paper is bound by an interpretivist research approach, meaning that the analysis and consequent discussion are based on the interpretation of the interviewees' accounts. However, the paper is limited in terms of the sample size, and it is, thus, important to acknowledge that with larger sample size, it is possible that other, perhaps even contradicting findings could have been made. Nevertheless, this simply highlights the importance of further research into the area. As this paper embraced an exploratory nature, the purpose was indeed to explore what a new combination of existing theory would result in, rather than generating new theories or generalizing the made findings.

The context in which this study was conducted also poses a limitation. As previously acknowledged, cf. 3.7. Trustworthiness of Research, the study took place in the specific setting of Copenhagen, and it can thereby be reasoned that the findings are limited to this particular context. Nonetheless, the paper does carry a case study approach, and thus, the aim was also to study a specific phenomenon in a specific context.

Lastly, this paper is limited by the one-sided representation of interviewees. As all interviewees identified as riders of the metro, albeit of varying frequency, the perspective of the Metro company itself is not represented. It can be argued that the absence of this perspective results in the loss of useful insights. Per the use of the term 'actor' already in the research question, this paper does not limit its scope to only investigating how the *riders'* value processes impact the well-being of the ecosystem. Instead, it opens up for the impact of any actor. Ultimately, the Copenhagen Metro was approached for potential collaboration but has yet to respond.

## 7.4 Suggestions for Future Research

Consequently, it is advised that further research takes on the scope of various actors, such as the company itself, for a multi-sided understanding of how utilization of actors' resources in value processes impact the well-being of the service ecosystem. By analyzing the accounts of various actors, it is believed that one will gain an even deeper understanding of the reasons behind each actor's actions. This is deemed beneficial in the pursuit of preventing value co-destruction, as well as in order to understand which actions result in value co-creation. This further adds to the call for further research by Plé (2016), who does acknowledge the dyadic nature of his own research, and, thus, points out the need for understanding the impact of various stakeholders. However, whilst Plé (2016) calls for understanding additional micro-interactions, this paper calls for research on value processes at the micro, meso, and macro levels as these all impact the service ecosystem's well-being.

Additionally, it is recommended that future research applies the proposed theoretical framework in different settings in order to understand the impact and boundaries of the context. Consequently, by expanding the empirical understanding of the discussed concepts, it is reasoned that generalizable theory will emerge. In line with this, it is also argued that future studies should enlarge the sample size to encompass more individual accounts. Through the representation of various interviewee profiles, it is reasoned to increase the likelihood of the findings leading to generalizable theory. Therefore, the findings made in this paper necessitate a cross-sectional approach to future research.

Furthermore, this research has demonstrated that there is an implicit yet arbitrary understanding, shared in academic literature, of what constitutes an interaction between an ecosystem's actors. To that end, future research ought to shed light on and clarify what constitutes an interaction in service-for-service exchanges and, thus, expand the foundational tenets of the Service-dominant Logic (Vargo & Lusch, 2004). For example, academic inquiries can elucidate, through further case studies, whether an interaction may only be understood as a verbal communication between the actors or if the mere presence of an actor may constitute an interaction.

Moreover, academic inquiries shall focus on the issue of well-being. Currently, there are numerous definitions of the concept that differ based on the research field. However, the question remains - how should well-being be objectively measured and quantified? Thus, future research ought to establish a measurable framework that can be applied by service providers and other businesses so that measuring the service ecosystem's well-being becomes a key performance indicator, similarly to quantifying customer satisfaction.

Lastly, it is suggested that future research shall uncover the concept of loose service ecosystems, such as the Copenhagen Metro. Such ecosystems shall be further understood in terms of (a) their implications on the resource integration process in service-for-service exchanges, (b) the nature of the relationship between the service ecosystem's actors, (c) the emergence of loose service ecosystems, and (d) the role of the various well-being domains, as identified by Leo et al. (2019), on collective well-being.

## 8. Conclusion

The purpose of this paper was to understand how the utilization of actors' resources in value processes impacts the well-being within a service ecosystem. By adopting the academic literature of customer experience, value processes, well-being, and service ecosystem, and further auxiliary concepts, an interdisciplinary theoretical framework was established. Through conducting an exploratory case study utilizing semi-structured interviews, the context of Copenhagen Metro was then analyzed.

In studying the particular case, this research utilized numerous individual accounts, provided by a total of nine interviewees. The findings of the paper allowed for understanding how the actors integrated or misintegrated resources in an array of service-for-service exchanges through analyzing the distinct experiences. Simultaneously, the data allow for comprehending the multifaceted customer experiences and their consequent impact on value processes. Through the herein identified various value processes, it was attainable to establish whether the nature of said value process was co-creative or co-destructive to the actors. Subsequently, it was possible to identify the impact that the value processes have on the actor's individual well-being. By means of this approach, the individual well-being accounts were aggregated so as to demonstrate their impact on the service ecosystem's well-being, i.e., collective well-being. Thereby, the well-being research agenda is advanced and permits a deeper understanding of its presence in service ecosystems. Nonetheless, the findings in this paper uncover that the Copenhagen Metro service ecosystem is unique due to the ambiguous relationships between the actors, which, eventually, cause a loose service ecosystem to emerge. Ultimately, the aforementioned nature of the service ecosystem impacts how resources can be utilized by actors and consequently the value processes that can take place within it.

Thus, to answer the research question, successful utilization of actors' resources leads to value co-creation, which positively impacts the individual well-being and, ultimately, the collective well-being of the service ecosystem. Conversely, a misintegration of resources causes value co-destruction that negatively impacts both individual and collective well-being within a service ecosystem. Nevertheless, one must account for the fact that value co-creation and co-destruction may co-occur. Thus, it would be an oversimplification to argue that these processes are entirely straightforward.

# References

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- Adams, W. J. (2015). Conducting Semi-Structured Interviews. In Newcomer, K. E., Hatry, H. P., & Wholey, J. S. (Eds.), *Conducting Semi-structured Interviews. Handbook of Practical Program Evaluation* (pp. 492-505). John Wiley & Sons.
- Anderson, L., & Ostrom, A. L. (2015). Transformative Service Research: Advancing Our Knowledge About Service and Well-Being. *Journal of Service Research, 18*(3), 243-249.
- Anderson, L., Ostrom, A. L., & Bitner, M. J. (2011). Surrounded by services: A new lens for examining the influence of services as social structures on well-being. *Working Paper*. W. P. Carey School of Business, Arizona State University.
- Anderson, L., Ostrom, A. L., Corus, C., Fisk, R. P., Gallan, A. S., Giraldo, M., Mende, M., Mulder, M., Rayburn, S. W., Rosenbaum, M. S., Shirahada, K., & Williams, J. D. (2013). Transformative service research: An agenda for the future. *Journal of Business Research, 66*, 1203-1210.
- Andrews, T. (2012). What is Social Constructionism? *The Grounded Theory Review, 11*(1), 39-46.
- Arnould, E. J., Price, L. L., & Malshe, A. (2006). Towards a cultural resource-based theory of the customer. In Lusch, R.F. and Vargo, S.L. (Eds), *The Service-Dominant Logic of Marketing: Dialog, Debate and Directions* (pp. 91-104). M.E. Sharpe.
- Auh, S., Menguc, B. & Jung, Y. S. (2014). Unpacking the relationship between empowering leadership and service-oriented citizenship behaviors: a multilevel approach. *Journal of the Academy of Marketing Science, 42*(5), 558-579.
- Åkesson, M., Edvardsson, B., & Tronvoll, B. (2014). Customer experience from a self-service system perspective. *Journal of Service Management 25*(5), 677-698.
- Baker, J. J., Fehrer, J. A., & Brodie, R. J. (2020). Service-dominant logic and market innovation. In Bridges, S., & Fowler, K. (Eds.), *The Routledge Handbook of Service Research Insights and Ideas* (pp. 24-45). Routledge.
- Banoun, A., Dufour, L., & Andiappan, M. (2016). Evolution of a service ecosystem: longitudinal evidence from multiple shared services centers based on the economies of worth framework. *Journal of Business Research, 69*(8), 2990-2998.
- Baraldi, E., Gressetvold, E., & Harrison, D. (2012). Resource interaction in inter-organizational networks: Foundations, comparison, and a research agenda. *Journal of Business Research, 65*(2), 266-276.
- Becker, L., & Jaakkola, E. (2020). Customer experience: fundamental premises and implications for research. *Journal of the Academy of Marketing Science, 48*(4), 630-648.



- Beckman, T. N. (1957). The Value Added Concept As A Measurement of Output. *Advanced Management*, 22(April), 6-9.
- Bitner, M. J. (1992). Servicescapes: The impact of physical surroundings on customers and employees. *Journal of Marketing*, 56(2), 57-71.
- Bitner, M. J., & Brown, S. W. (2008). The Service Imperative. *Business Horizons*, 51(January-February), 39-46.
- Bitner, M. J., Faranda, W. T., Hubbert, A. R., & Zeithaml, V. A. (1997). Customer contributions and roles in service delivery. *International Journal of Service Industry Management*, 8(3), 193-205.
- Black, H. G., & Gallan, A. S. (2015). Transformative service networks: cocreated value as well-being. *The Service Industries Journal*, 35(15-16), 826-845.
- Bocconcelli, R., Carlborg, P., Harrison, D., Hasche, N., Hedvall, K., & Huang, L. (2020). Resource interaction and resource integration: Similarities, differences, reflections. *Industrial Marketing Management*, 91, 385-396.
- Bourdieu, P. (1977). *Outline of a Theory of Practice*. Cambridge University Press.
- Bryman, A., & Bell, E. (2011). *Business Research Methods* (3rd ed.). Oxford University Press.
- Cabiddu, F., Moreno, F., & Sebastiano, L. (2019). Toxic collaborations: co-destroying value in the B2B context. *Journal of Service Research*, 22(3), 241-255.
- Chandler, J. D., & Vargo, S. L. (2011). Contextualization and value-in-context: How context frames exchange. *Marketing Theory*, 11(1), 35-49.
- Clegg, S. R., & Cooper, C. L. (Eds) (2008). *The SAGE Handbook of Organizational Behavior: Volume Two: Macro Approaches*. Sage.
- Collis, J., & Hussey, R. (2013). *Business Research: A practical Guide for Undergraduate and Postgraduate Students*. Macmillan International Higher Education.
- Coombs, R., & Miles, I. (2000). Innovation, measurement and services: The new problematique. In J. S. Metcalfe & I. Miles (Eds.), *Innovation Systems in the Service Economy: Measurement and Case Study Analysis* (pp. 85-103). Kluwer Academic Publishers.
- Cope, D. G. (2014). Methods and meanings: Credibility and trustworthiness of qualitative research. *Oncology Nursing Forum* (41)1, 89-91.
- COWI (2021). *The Copenhagen Metro, Denmark*.  
<https://www.cowi.com/solutions/infrastructure/copenhagen-metro#>
- Daymon, C., & Holloway, I. (2011). *Qualitative Research Methods in Public Relations and Marketing Communications* (2nd ed.). Routledge.
- Denzin, N. K., & Lincoln, Y. S. (2005). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 1-32). Sage.

- Diener, E. (2000). Subjective well-being: The science of happiness and a proposal for a national index. *American Psychologist*, 55(1), 34–43.
- Diener, E., & Lucas, R. E. (1999). Personality and subjective well-being. In D. Kahneman, E. Diener, & N. Schwartz (Eds.), *Well-being: The Foundations of Hedonic Psychology* (pp. 213–229). Russell Sage Foundation.
- Dubois, A., & Gadde, L.-E. (2002). Systematic combining: an abductive approach to case research. *Journal of Business Research*, 55, 553-560.
- Echeverri, P., & Skålén, P. (2011). Co-creation and co-destruction: A practice-theory based study of interactive value formation. *Marketing Theory*, 11(3), 351-373.
- Edvardsson, B., Kleinaltenkamp, M., Tronvoll, B., McHugh, P., & Windahl, C. (2014). Institutional logics matter when coordinating resource integration. *Marketing Theory*, 14(3), 291-309.
- Ejsing, J. (2020, February 13). Metroen larmer stadig: Her er gaderne med flest nye klager over Cityringen. *Berlingske*. <https://www.berlingske.dk/hovedstaden/metroen-larmer-stadig-her-er-gaderne-med-flest-nye-klager-over>
- Frow, P., McColl-Kennedy, J. R., Payne, A., & Govind, R. (2019). Service ecosystem well-being: conceptualization and implications for theory and practice. *European Journal of Marketing*, 53(12), 2657-2691.
- Gentile, C., Spiller, N., & Noci, G. (2007). How to sustain the customer experience:: An overview of experience components that co-create value with the customer. *European Management Journal*, 25(5), 395-410.
- Grönroos, C. (1988). Service quality: the six criteria of good perceived service quality. *Review of Business*, 9(3), 10-13.
- Gummesson, E. (1994). Service Management: An Evaluation and the Future. *International Journal of Service Industry Management*, 5(1), 77-96.
- Gummesson, E., & Mele C. (2010). Marketing as value co-creation through network interaction and resource integration. *Journal of Business Market Management*, 4(4), 181-198.
- Haybron, D. M. (2008). Happiness, the Self and Human Flourishing. *Unitas*, 20(1), p. 21-49.
- Håkansson, H. (1982). *International Marketing and Purchasing of Industrial Goods: An Interaction Approach*. John Wiley & Sons.
- Heinonen, K., Strandvik, T., Mickelsson, K. J., Edvardsson, B., Sundström, E., & Andersson, P. (2010). A customer-dominant logic of service. *Journal of Service management*, 21(4), 531-548.
- Iansiti, M., & Levien, R. (2004). *The Keystone Advantage*. Harvard Business Press.
- Ilies, R., Morgeson, F. P., & Nahrgang, J. D. (2005). Authentic leadership and eudaemonic well-being: understanding leader–follower outcomes. *The Leadership Quarterly*, 16(3), 373-394.

- Järvensivu, T., & Törnroos, J.-Å. (2010). Case study research with moderate constructionism: Conceptualization and practical illustration. *Industrial Marketing Management*, 39, 100-108.
- Järvi, H., Kähkönen, A. K., & Torvinen, H. (2018). When value co-creation fails: Reasons that lead to value co-destruction. *Scandinavian Journal of Management*, 34(1), 63-77.
- Johns, N. (1999). What is this thing called service? *European Journal of Marketing*, 33(9/10), 958-983.
- Jones, A., Goodman, A., Roberts, H., Steinbach, R., & Green, J. (2013). Entitlement to concessionary public transport and wellbeing: a qualitative study of young people and older citizens in London, UK. *Social Science & Medicine*, 91, 202-209.
- Kallio, H., Pietilä, A. M., Johnson, M., & Kangasniemi, M. (2016). Systematic methodological review: developing a framework for a qualitative semi-structured interview guide. *Journal of Advanced Nursing*, 72(12), 2954-2965.
- Kelley, S. W., Donnelly, J. H. Jr., & Skinner, S. J. (1990). Customer participation in service production and delivery. *Journal of Retailing*, 66(3), 315-335.
- Kohli, A. K. (2006). Dynamic integration: Extending the concept of resource integration. *Marketing Theory*, 6(3), 290-291.
- Kotler, P. (1973). Atmospherics as a marketing tool. *Journal of retailing*, 49(4), 48-64.
- Kuppelwieser, V. G., & Finsterwalder J. (2016). Transformative service research and service-dominant logic: Quo Vaditis?. *Journal of Retailing and Consumer Sciences*, 28, 91-98.
- Laud, M., Bove, L., Ranaweera, C., Leo, W. W. C., Sweeney, J., & Smith, S. (2019). Value co-destruction: a typology of resource misintegration manifestations. *Journal of Services Marketing*, 33(7), 866-889.
- Lemon, K. N., & Verhoef, P. C. (2016). Understanding customer experience throughout the customer journey. *Journal of Marketing*, 80(6), 69-96.
- Leo, W. W. C., Laud, G., Chou, C. Y. (2019). Service system well-being: conceptualizing a holistic concept. *Journal of Service Management*, 30(6), 766-792.
- Lincoln, Y. S., & Guba, E. G. (1985). Establishing trustworthiness. *Naturalistic Inquiry*, 289(331), 289-327.
- Lincoln, Y. S., & Guba, E. G. (1986). But is it rigorous? Trustworthiness and authenticity in naturalistic evaluation. *New Directions for Program Evaluation*, 1986(30), 73-84.
- Lusch, R. F., & Vargo, S. L. (2014). *Service-dominant logic: Premises, perspectives, possibilities*. Cambridge University Press.
- Lusch, R. F., Vargo, S. L., & O'Brien, M. (2007). Competing through service: Insights from service-dominant logic. *Journal of Retailing*, 83(1), 5-18.
- Maklan, S., & Klaus, P. (2011). Customer experience: are we measuring the right things?. *International Journal of Market Research*, 53(6), 771-772.

- Metro (2021a). *The History*. <https://intl.m.dk/about-the-metro/facts/history/>
- Metro (2021b). *Alt om metroen*. <https://m.dk/om-metroen/>
- Metro (2021c). *Metroens passagertal*. <https://m.dk/om-metroen/metroen-i-tal/>
- Metro (2021d). *Metroens togsystem*. <https://m.dk/om-metroen/metroens-koncept/togsystemet/>
- Metro (2021e). Metroens køreplan - på minuttet. <https://m.dk/rejser/se-metroens-k%C3%B8replan/>
- Metro (2021f). *Ejerstruktur og interessentskabsmøder*. <https://m.dk/om-metroen/organisation/virksomhedsledelse/ejerstrukturen/>
- Metro (2021g). *Driftsoperatøren Metro Service*. <https://m.dk/om-metroen/driftsoperat%C3%B8ren-metro-service/>
- Meyer, C., & Schwager, A. (2007). Understanding customer experience. *Harvard Business Review*, 85(2), 117-126.
- Narver, J. C., & Slater, S. F. (1990). The effect of a market orientation on business profitability. *Journal of Marketing*, 54(4), 20-35
- Ostrom, A. L., Bitner, M. J., Brown, S. W., Burkhard, K. A., Goul, M., Smith-Daniels, V., Demirkan, H., & Rabinovich, E. (2010). Moving Forward and Making a Difference: Research Priorities for the Science of Service. *Journal of Service Research*, 13(1), 4-36.
- Østergaard, C. (2015, February 6). Sydhavnsmetroen er vedtaget. *Ingeniøren*. <https://ing.dk/artikel/sydhavnsmetroen-er-vedtaget-173968>
- Plé, L. (2016). Studying customers' resource integration by service employees in interactional value co-creation. *Journal of Services Marketing*, 30(2), 152-164.
- Plé, L. (2017). Why do we need research on value co-destruction?. *Journal of Creating Value*, 3(2), 162-169.
- Plé, L., & Chumpitaz Cáceres, R. (2010). Not always co-creation: introducing interactional co-destruction of value in service-dominant logic. *Journal of Services Marketing*, 24(6), 430-437.
- Polese, F., Pels, J., Tornvall, B., Bruni, R., & Carrubbo, L. (2017). A4A relationships. *Journal of Service Theory and Practice*, 27(5), 1040-1056.
- Prekert, F., Hasche, N., & Linton, G. (2019). Towards a systematic analytical framework of resource interfaces. *Journal of Business Research*, 100, 139-149.
- Prior, D. D., & Marcos-Cuevas, J. (2016). Value co-destruction in interfirm relationships: The impact of actor engagement styles. *Marketing Theory*, 16(4), 533-552.
- Rathmell, J. M. (1966). What is Meant by Services? *Journal of Marketing*, 30(4), 32-36.
- Rosenbaum, M. S. (2015). Transformative service research: focus on well-being. *The Service Industries Journal*, 35(7-8), 363-367.

- Rosenbaum, M. S., Corus, C., Ostrom, A. L., Anderson, L., Fisk, R. P., Gallan, A. S., & Williams, J. D. (2011). Conceptualization and aspirations of transformative service research. *The Journal of Consumer Research*, 19, 1–6.
- Rosenbaum, M. S., & Massiah, C. (2011). An expanded servicescape perspective. *Journal of Service Management* 22(4), 471-490.
- Rust, R. (1998). What Is the Domain of Service Research?. *Journal of Service Research*, 1(2), 107.
- Saldaña, J. (2016). *The Coding Manual for Qualitative Researchers* (3rd ed.). SAGE Publications Inc.
- Sandström, S., Edvardsson, B., Kristensson, P., & Magnusson, P. (2008). Value in use through service experience. *Managing Service Quality: An International Journal*, 18(2), 112-126.
- Saunders, M., Lewis, P., & Thornhill, A. (2009). *Research Methods for Business Students*. Pearson education.
- Sawyer, R. K. (2005). *Social Emergence: Societies as Complex Systems*. Cambridge University Press.
- Schembri, S. (2006). Rationalizing service logic, or understanding services as experience?. *Marketing Theory*, 6(3), 381-392.
- Shenton, A. K. (2004). Strategies for ensuring trustworthiness in qualitative research projects. *Education for Information*, 22(2), 63-75.
- Schiavone, F., Leone, D., Sorrentino, A., & Scaletti, A. (2020). Re-designing the service experience in the value co-creation process: an exploratory study of a healthcare network. *Business Process Management Journal*, 26(4), 889-908.
- Sirgy, M. J., Widgery, R. N., Lee, D.-J., & Grace, B. Y. (2010). Developing a measure of community well-being based on perceptions of impact in various life domains. *Social Indicators Research*, 96(2), 295-311.
- Statista (2021, March 31). *Denmark: Share of economic sectors in the gross domestic product (GDP) from 2009 to 2019*. <https://www.statista.com/statistics/317288/share-of-economic-sectors-in-the-gdp-in-denmark/>
- Taillard, M, Peters, L. D., Pels, J., & Mele, C. (2016). The role of shared intentions in the emergence of service ecosystems. *Journal of Business Research*, 69, 2972-2980.
- Tariq, A., Rashid, Y., & Waseem, A. (2020). Value Co-Creation in Travel Industry: Examining the Impact of Operand and Operant Resources on Actor Experience. *Journal of Management Sciences*, 7(1), 31-46.
- Tombs, A., & McColl-Kennedy, J. R. (2003). Social-servicescape conceptual model. *Marketing Theory*, 3(4), 447-475.
- Turley, L. W., & Milliman, R. E. (2000). Atmospheric effects on shopping behavior: a review of the experimental evidence. *Journal of Business Research*, 49(2), 193-211.

- Van Heuvelen, T. (2018). Recovering the missing Middle: a mesocomparative analysis of within-group inequality, 1970–2011. *American Journal of Sociology*, 123(4), 1064–1116.
- Vargo, S. L., & Akaka, M. A. (2012). Value Cocreation and Service Systems (Re)Formation: A Service Ecosystems View. *Service Science*, 4(3), 207–217.
- Vargo, S. L., Koskela-Huotari, K. & Vink, J. (2020). Service-dominant logic - Foundations and applications. In Bridges, S., & Fowler, K. (Eds.), *The Routledge Handbook of Service Research Insights and Ideas* (pp. 3-23). Routledge.
- Vargo, S. L., & Lusch, R. F. (2004). Evolving to a new dominant logic for marketing. *Journal of Marketing*, 68(1), 1–17.
- Vargo, S. L., & Lusch, R. F. (2006). Service-dominant logic: what it is, what it is not, what it might be. In Lusch, R. F., & Vargo, S. L. (Eds.), *The Service-Dominant Logic of Marketing: Dialog, Debate, and Directions* (pp. 43–56). ME Sharpe.
- Vargo, S. L., & Lusch, R. F. (2008). Service-dominant logic: Continuing the evolution. *Journal of the Academy of Marketing Science*, 36(1), 1–10.
- Vargo, S. L., & Lusch, R. F. (2011). It's all B2B ... and beyond: Toward a systems perspective of the market. *Industrial Marketing Management*, 40(2), 181–187.
- Vargo, S. L., & Lusch, R. F. (2016). Institutions and axioms: An extension and update of service-dominant logic. *Journal of the Academy of Marketing Science*, 44(4), 5–23.
- Vargo, S. L., & Lusch, R. F. (Eds.). (2018). *The SAGE Handbook of Service-dominant Logic*. SAGE Publications Inc.
- Visit Denmark (2019). Metro map [Online image]. Copenhagen Metro's new designer Circle Line. <https://www.visitdenmark.com/press/latest-news/copenhagen-metro-circle-line>
- Waterman, A. S. (1992). Identity as an aspect of optimal psychological functioning. In Adams, G. R., Gullotta, T. P., & Montemayor, R. (Eds.), *Adolescent Identity Formation: Advances in Adolescent Development* (pp. 50-72). Sage.
- Wieland, H., Vargo, S.L., & Akaka, M.A. (2016). Zooming out and zooming in: service ecosystems as venues for collaborative innovation. In Toivonen, M. (Ed.), *Service Innovation* (pp. 35-50). Springer.
- Wrightsman, L.S. (1991). Interpersonal trust and attitudes toward human nature. In Robinson, J. P., Shaver, P. R., & Wrightsman, L. S. (Eds.), *Measures of Social Psychological Attitudes* (pp. 373-412). Academic Press
- Yin, R. K. (2018). *Case Study Research and Applications: Design and Methods* (6th ed.). SAGE Publications Inc.
- Zeithaml, V. A., Bitner, M. J., & Gremler, D. D. (2018). *Services Marketing: Integrating Customer Focus Across the Firm* (7th ed.). McGraw-Hill Education.
- Zeithaml, V. A., Parasuraman, A., & Berry, L. L. (1985). Problems and strategies in services marketing. *Journal of Marketing*, 49(2), 33–46.

# Appendices

## Appendix 1 - Interview Guide

### General Questions

- 1) How do you transport yourself around and in the city?
  - a) Why do you use public transportation? Why do you not?
  - b) Why do you take the metro/bus/train/bike/car, rather than other means of transportation?
  - c) Does the metro always get you where you need to go?
    - i) Are you satisfied with the network?
    - ii) Do you have to switch?
- 2) How often would you say you take the metro?
- 3) Are there situations when you would not take the metro?
- 4) What is your general view of the metro?

### Well-being

- 5) Can you recall some good experiences with the metro? // What are some things you like about the Metro?
  - a) What made you feel that way?
- 6) Can you recall some bad experiences with the metro? // If you could change anything about the Metro, what would it be?
  - a) What made you feel that way?
    - i) e.g., full trains, broken down train, Rejsekort readers not functioning, escalators stuck
- 7) How do you experience the Metro's communication efforts?
- 8) In your experience, does the metro operate well?
  - a) Have you ever gotten stranded when on the metro, if so, what was that experience like for you?
- 9) Have you ever experienced any issues with getting a ticket? (Rejsekort, DOT app)
  - a) How do you buy a ticket when taking the metro?
    - i) Have you ever used the DOT app?
- 10) Have you ever interacted with any personnel?
  - a) If so, could you describe this interaction?
- 11) Have you ever been checked for your tickets?
  - a) Could you describe that experience?
- 12) Do you interact with others (other riders) when you are on the metro or at the station?
- 13) Do you generally feel safe on the metro?
  - a) Have you ever experienced otherwise?
  - b) What is it that makes you feel safe/unsafe?
- 14) How would you describe/evaluate the metro's physical design?
  - a) Trains
  - b) Station design

- c) Signage
  - d) Accessibility
  - e) Do you have different experiences with the different metro lines?
- 15) Would you say the physical design influences your behavior? Have you ever discussed the metro with others? If so, what did you discuss?
- a) If so, was it in person or online?

**Demographics**

- 16) Where do you live?
- 17) What is your occupation?
- 18) Under normal circumstances, how many times per week do you take the metro?



## Appendix 2 - Interview Transcripts

### Appendix 2.1 - BK Transcript

- 00:00:02**  
Jakub Well. First and foremost, thank you again for being willing to do this interview with us. We appreciate it very much. We just want to ask you as the very first thing, if it's OK that we record this meeting and use it later on.  
,
- 00:00:27**  
BK Yes, of course.  
,
- 00:00:29**  
Jakub OK. Amazing. Thank you very much. So just to give you a little bit of an idea of what Josefin and I are doing, what our research is about, we are interested in your experiences with the metro in Copenhagen, and that is also essentially our core topic of our research. So we have a bunch of questions ready and we will just go through them, have an open discussion, and then should there be a question that you do not understand or don't wish to answer, you can just say so. Do you have any questions right now?  
,
- 00:01:03**  
BK No, I'm hoping that I understand everything. And I guess the Metro system is not such a sensitive topic that I don't want to answer. So let's do it.  
,
- 00:01:13**  
Jakub We hope it's not a very sensitive topic. That's our belief.  
,
- 00:01:19**  
Josefin All right. Well, to get started, well, you need to go anywhere in Copenhagen, what's your main way of transporting yourself there?  
,
- 00:01:26**  
BK Biking, of course, as a young and broke student.  
,
- 00:01:32**  
Josefin Is it always or do you use local transportation?  
,
- 00:01:34**  
BK Sometimes I do use local transportation, sometimes, not too often. And when I use I always have a reason to do it, like.. The weather being bad or I have to carry something with myself, so something kind of external circumstances.  
,
- 00:01:58**  
Jakub And if you already take the public transportation, do you have a preferred means of public transportation?  
,
- 00:02:06**  
BK Um, I mean, ideally I like taking the bus because I like watching the view. But honestly, what I do is just Google my location and then just take the fastest transportation always. So that's often Metro, actually.  
,

- 00:02:25**  
Josefin Do you Google to find the way to go there, or do you sometimes use the Rejseplan app?
- ,
- 00:02:31**  
BK No, always Google Maps or as I know it by heart, if I, if it's like one of my friends places or something.
- ,
- 00:02:40**  
Jakub Do you find it a reliable source of information?
- ,
- 00:02:44**  
BK Um, Google Maps. Yes, I do. Um, although I often not.. I'm not too stressed about being on time, so I don't actually really care about being there, like super precise. Um, but I trust Google that it would give me the best option.
- ,
- 00:03:07**  
Josefin Would you say that when you take the Metro, does it always get you where you want to go?
- ,
- 00:03:15**  
BK Good question. Not all time, sometimes.. Actually now thinking of it, most of the time. I'm taking my bike with me because it's easier to continue from a certain point with my bike. This is what I do to work as well, although that's not Metro, but s-train. But I take my bike and then just jump off and then bike.
- ,
- 00:03:41**  
Josefin What would you say the experience is like taking the bike on the Metro compared to the s-train?
- ,
- 00:03:50**  
BK Good question. One thing that I really hate about taking my bike on the Metro is that I can't recharge my Rejsekort down there because I often use the elevator from street level all the way down. And since I'm not using public transportation that often, I have the anonymous Rejsekort and I'm not putting much money on it because I know myself that I might lose it. So I always top it off with like a hundred or two hundred. And that's why I often run out of money on it, actually, and then just realize after checking that I need to recharge it and then I have to go all the way up and then recharge it. So in an ideal scenario, I would have like a charging station down there, so I don't have to go all the way up and down.
- ,
- 00:04:42**  
Josefin So what would be then, like you briefly mentioned it, but what would be some situations when you wouldn't take the Metro?
- ,
- 00:04:52**  
BK Like, in what sense do you mean that I have to take the public transportation because it's raining so I can bike? Bike is not an option? Uh, yeah, great question. I don't really know, like, I have nothing really against the metro. Sometimes we end up deciding on bus because another occasion when I use public transportation is with friends, and then sometimes we just end up choosing something which is equally good for both of us. So sometimes then we decide on taking the bus because that's

like kind of in between the final destination to both of our houses, although Metro would be more convenient for me in terms of distance, but. Yes, sometimes you just take the bus because that's the best for the common.

**00:05:44**  
Jakub

And then, generally speaking, what is your personal view of the Metro?

**00:05:53**  
BK

I, I like it. I think it's really modern, actually. When I lived in different cities, in Lisbon or in Budapest, then I used to think that 'oh, the metro system is so good there'. But then moving here made me realize that actually the metro system is really bad at home. So I think in general I like it. And it's I think it's well connecting, now with the circle stuff. The new red line. Maybe one thing that I dislike about the red line is that I never know which direction is the faster, should I take the left or the right? And I'm always like, I'm having to go to the map all the way and then check the map and kind of count the stations. But that's a minor thing.

**00:06:41**  
Jakub

So if you had to compare based on your previous experiences, as you said, from Lisbon or Budapest, how does the Copenhagen metro compare with those?

**00:06:53**  
BK

Um. It's definitely cleaner, it's faster. And maybe even better connected, at least comparing it to Lisbon, then it's definitely better connected. I think Budapest is doing fine on the connections, but it's just like super crowded and old cars and always super full and never on time. So that's another thing that I like in Copenhagen, that the screen is always super accurate and trains are coming after one another every two minutes. So, yeah, I don't know if I covered all aspects, but I think all in all it's better.

**00:07:43**  
Josefin

And so if you could change anything with the Copenhagen Metro, what would that be?

**00:07:49**  
BK

Yeah. Let's see, I dislike.. I don't know if that's actually changeable, but let's be just super off limits now. It is the no bike hours, but then when I can't take my bikes in the rush hour. As I said, I really hate that I always have to go down, see if my Rejsekort have enough money and then go all the way up to charge it. So I would make that easier somehow. Also, I often end up having no space for my bike, and then you just awkwardly stand in the middle and you can't really find your space and that's better on the s-train, actually, because you can put your bike in. What else could be changed? Yeah, in terms of graphics and the station names, I think it's really fine, um. Yeah, maybe a super millennial reason is that sometimes you have no coverage, so you can't use your phone and.. This is really a minor thing.

**00:09:01**  
Jakub

Of course, so based on your experiences, how do you perceive the communication between you as a passenger and the Metro company?

**00:09:16**  
BK I have no idea who runs the Metro or who is the metro company behind it. I really have no clue about public transportation companies in Denmark. And I never been really bothered to look it up because it works fairly fine, and as I said, I'm not using it that often. So.  
,

**00:09:39**  
Josefin Have you ever been in a situation where you've gotten stuck or something like that?  
,

**00:09:46**  
BK Yeah, I got stuck once, actually, and it was really bad timing because I was late from work and then we stopped for, like. I don't want to say something which is not accurate, but I think we stop for like 10 minutes. But only once out of all the hundred times that I was using, it's no big deal.  
,

**00:10:10**  
Josefin Do you remember if the.. Like what was the communication from the Metro in that situation? Did you feel updated or left out?  
,

**00:10:23**  
BK I I think it was.. First, actually, they only said it in Danish because I remember. Wanting to message my manager that I'm going to be late because the metro is delayed because .. and I don't know why, but then I think they said it again in English and then it was just like technical reasons. So something like which is blurry enough. But I like.. I trust the system in Denmark, so I don't.. I was not afraid that I would be stuck forever.  
,

**00:11:03**  
Jakub So as you already mentioned, you use Rejsekort normally to get your ticket, do you or have you ever used any other way of getting a ticket?  
,

**00:11:15**  
BK Yeah, in the beginning, I was really committed to biking and then I only got tickets when I had to use it, um. But yeah, I'm using Rejsekort for over a year now.  
,

**00:11:32**  
Josefin Have you ever experienced any issues, when getting a ticket?  
,

**00:11:38**  
BK No, not really. I mean, of course, in the first few weeks when I moved to Denmark, I was struggling with going to the airport or like going to different places because I didn't really get these zone things when you have to buy the ticket. But that also could be that I'm just confused and not really using public transportation on a general basis in any other country that much so.  
,

**00:12:08**  
Jakub Have you ever use the DOT app to buy your ticket?  
,

**00:12:13**  
BK I'm an old school guy.  
,

**00:12:23**  
Josefin                    So when you're.. When you're around the metro on there, have you ever interacted with any personnel?  
,

**00:12:29**  
BK                            Uh. Yes, once I was taking down my bike and then someone was screaming at me that it's rush hour so I should go all the way back up and leave my bike.  
,

**00:12:42**  
Josefin                    Was that someone who was working for the Metro?  
,

**00:12:44**  
BK                            Yeah, yeah, yeah, like this ticket controller. I was not actually sure what's her job because she was just standing next to these Rejsekort machines. So I think she was just checking that people are actually checking in.  
,

**00:12:57**  
Josefin                    And how did you feel that experience was?  
,

**00:13:02**  
BK                            Yeah, I was late and of course pissed, so I actually got really mad at her for screaming me in such a way. Because first she was speaking Danish and then when she switched to English, she was actually really mean. She was like 'oh, my God, I can't believe that you don't realize that'. So yeah, that was a bad experience.  
,

**00:13:23**  
Jakub                      Can you recollect when that happened, what year it was?  
,

**00:13:27**  
BK                            Yeah, it was not so long ago because I was going to actually your place to do the thesis. So I think it was a month ago, too.  
,

**00:13:39**  
Jakub                      And so have you ever been checked for your tickets?  
,

**00:13:44**  
BK                            Uh, once or twice and only on the metro, actually s-train, never checks and neither the bus, I think.  
,

**00:13:54**  
Jakub                      And how would you describe these two situations, these two experiences when you got checked?  
,

**00:14:02**  
BK                            It was just normal, nice guy. I noticed him from afar, so I prepared my ticket. And I think he said something in Danish, but just like 'please provide your tickets or something'. And then I just gave it to him. It was quick and sweet.  
,

**00:14:20**  
Josefin                    Have you ever interacted with any other riders on the Metro?  
,

- 00:14:25**  
BK  
Yes, I have a really funny one, actually. From the time when I was going to Josefin's birthday with the cake that I baked, a random guy came to me and he was like 'oh, is that cake for me?' And I was like 'oh, my God, sure, why not?' And then he told me that he's actually doing a survey and if he could follow me and then I can answer some questions while he is coming. And then I was like, yeah, sure, why not? And then he wanted to do like an innovative bakery when people bake their own stuff and then they just sell it to one another. And then he just made some questions on that. And that's it, it was actually really fun. Cool guy. Yeah.
- ,
- 00:15:10**  
Josefin  
How did you experience that interaction? Like, how did you feel?
- ,
- 00:15:14**  
BK  
Um, yeah, I was really happy about it. I was in a good mood and he was really kind, so I wouldn't mind. And sometimes I miss these things actually from Denmark or like the Danish society that people actually engage in random conversation. Um, and actually he was even asking me, like 'Where are you from? Because you are clearly not Danish' and then I was like 'Yeah, I'm not'. Yeah, so I actually liked it. I think it was a nice experience.
- ,
- 00:15:48**  
Jakub  
Do you generally seem.. Feel safe on the metro and at the stations?
- ,
- 00:15:56**  
BK  
Yes, I do. I mean, very few times when I'm coming home super late to Nørrebro station and I see some sketchy people hanging around and they're drinking and smoking, then I'm being a little shy and just like try to go in a quicker way, but. Yeah, most of the times I'm I'm feeling super safe.
- ,
- 00:16:24**  
Jakub  
Are there any specific aspects or attributes that actually contribute to this feeling of safety in you?
- ,
- 00:16:38**  
BK  
Uh. Yeah, sorry for taking forever, but, um, better to think about it. Um. I think as an overarching fact, I can just say that we are in Denmark. I never really felt unsafe ever here. And then if I have to specify it on the Metro, then I actually like that it's well lit up, the stations and the metros as well, like the trains, um. And I like that I at least always.. It's kind of like an open space, so I have like a clear overview of the people who are sitting there and it's like.. I'm almost always in.. Like I'm always never alone. It's always like with other passengers. And then I think that gives me a sense of safety.
- ,
- 00:17:37**  
Jakub  
OK, and so now that you have mentioned already the lighting at the stations, how would you evaluate other design aspects of the Metro and the stations and the facilities?
- ,
- 00:17:54**  
BK  
Uh. Yeah, that's also a good one. Oh, yeah, I think also just like that, that might be a very designerish comment, but just the architecture and then

the product design of the stuff gives you this sense of... Not safety, but like, it's kind of sterile, so it's really minimalistic, and then you always have these big spaces, an overview of everything in the stations and you can really look afar. And I think that's really great. Um. And what us in terms of safety. I like that the trains are like.. As well, again, it's kind of space, but it's just like a long train and there is no division in between them, and that's actually also a really good aspect. And it might not be safety, but sometimes you just don't want to sit nearby to people who are having, let's say, like a loud conversation and, you know, that they are super drunk and then you are just not in the mood to interact at the moment. So I like that it's really easy to go from one place to another. You don't really have to think of where to get on the train.

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**00:19:17**  
Josefin

And if we think a bit more about the stations themselves, how would you evaluate or describe the signage and how they affect you?

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**00:19:30**  
BK

The spaces?.. Yeah, I think I don't know if I have any opinion on it. I like that they are clean. And that they always kind of have the same structure, even though the stations are kind of different, but it gives me maybe.. It helps me maybe with orientating myself like I always know how to go down, how to go up, um, even though I'm actually quite bad with directions. But I never really faced any issue with the stations.

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**00:20:12**  
Josefin

So do you feel like there's enough signs and stuff to help you get around?

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**00:20:20**  
BK

I think so, because I don't think that signs would help me honestly, because being a foreigner, I don't really know the street names. And so I actually find it often in other cities, I find it annoying that they say like 'oh, you go up here to go to this square' and I have no idea. So I actually really just need to go up and then orientate myself by what I see.

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**00:20:50**  
Jakub

Would you say that there is a difference in.. Or would you say that you have different experiences from the different metro lines?

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**00:21:01**  
BK

Uhm.. I almost never use the blue, but I think it's just because I have no friends living in Nordhavn or like that direction. I really like the green one because it goes out at the end, close to Vestamager, and I'm taking that quite often lately, so that's a good one. And as I said, with the red one, the circular, I don't know what's the name of that, I dislike that I never know like which direction should I take. But then I guess that again has to do with me not knowing the station names that much because it's in Danish. You can't really pronounce it. So you don't remember that much.

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**00:21:51**  
Jakub

And so when you are at the station or on the train, would you say that these spaces influence how you act in that given space or does it influence your behavior?

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**00:22:10**  
BK  
I'm not sure if it does. It always puts me in a good mood to sit in the front, actually, because I like seeing the stuff going on. But yeah, I don't think that it actually has anything to do with my mood. I often take public transportation as just from a very functional perspective. I don't really engage in the space.  
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**00:22:36**  
Josefin  
And have you ever discussed your experiences on and with the Metro, with others?  
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**00:22:45**  
BK  
Yeah, I actually talked about.. That it's really exciting, actually, how things are coming back to me. I just talked about Rejsekort with a friend of mine, although that's not really metro related, but just in general that it's kind of annoying that you never know how much you're going to pay. You just check in and then be like whatever you will see at the end. Um. And I find it a bit weird, I mean, I just love the safety of me paying in advance then just like going on it and.. And in the beginning, now I'm super used to it, but in the beginning I always forgot to check out. So that was kind of mad. Maybe a sign for that. Like, don't forget to check out guys. That will be great.  
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**00:23:33**  
Jakub  
Have you ever used the Rejseplanen app to check the right price?  
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**00:23:38**  
BK  
No, I didn't even know that there was an app to check it.  
,

**00:23:44**  
Jakub  
Oh, OK, uh, yeah.  
,

**00:23:51**  
BK  
I guess poor marketing. Although I think to be fair, I don't know, I mean, I don't know much about your research study, but being a foreigner and also kind of an impulsive person, I often just take advice from friends and then just follow what people do and don't like.. With Rejsekort, I didn't even research much. I was just 'I've been told by a friend that that's the way to do it' and then I bought a card at a 7-Eleven and..  
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**00:24:23**  
Jakub  
And if you've been using it ever since?  
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**00:24:25**  
BK  
Yeah.  
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**00:24:29**  
Josefin  
How often would you say that you take the Metro?  
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**00:24:38**  
BK  
I want to say.. I don't know. Twice a month maybe? I used to take it more often before covid because then after parties it was sometimes just easier to use it. Yeah, but not actually maybe a bit more, maybe four times, because I have a friend who lives quite afar and then I always take the



Metro because Nordvest and Vestamager, that's like a distance that I would never bike.

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**00:25:13**  
Jakub

That is quite a distance indeed.

,

**00:25:18**  
Josefin

I think that most of it.

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**00:25:20**  
Jakub

OK. Yes. Those are all the questions that we have prepared for you. So thank you for that. We just have a couple of demographical questions for you. Well, a couple. Yes. So the first one being, where do you live?

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**00:25:42**  
BK

I live in Nordvest Copenhagen, close to Nørrebro station.

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**00:25:47**  
Josefin

And what's your occupation?

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**00:25:50**  
BK

I work as a strategic designer in a small design firm. All right. And I'm a student, actually, that's maybe something to mention, I'm just doing an internship, so I'm still quite broke.

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**00:26:08**  
Jakub

Awesome. Thank you very much.

## Appendix 2.2 - EG Transcript

- 00:00:51**  
Jakub                                    So thank you very much, Elisabeth, for being willing to do this interview with us. First and foremost, we just want to ask you if you are OK with us recording this interview and then consequently transcribing it.
- 00:01:01**  
EG    Yes, that's fine.
- 00:01:03**  
Jakub                                    Brilliant. OK, so just to give you a little bit of an idea of what Josefin and I are actually writing about, we are looking into the metro system in Copenhagen. And what we are going to be talking about are basically your experiences with the Metro. So we have a bunch of questions prepared for you, but, you know, it's an open discussion - So you can say really whatever you want. And should there be a question that you do not understand or do not wish to answer, then you are always, of course, free to say so. And then we just skip it or rephrase it. All right. So do you have any questions right now?
- 00:01:45**  
EG    Not yet. No.
- 00:01:46**  
Jakub                                    No. OK, then we can just jump right into it.
- 00:01:50**  
Josefin                                    Let's get started. So if you need to go anywhere in Copenhagen - What's your main way of transporting yourself there?
- 00:01:58**  
EG    Right now it's on my electric bike, which I love.
- 00:02:02**  
Josefin                                    And what did it used to be?
- 00:02:04**  
EG    It used to be the Metro.
- 00:02:06**  
Josefin                                    All right, and how come it's not anymore?
- 00:02:09**  
EG    Um, I wanted to buy an electric bike for a long time because I love biking, but because the distance from home to work is 11 kilometers. Yeah, I just took the metro for convenience and then I just thought - You know what? Sod it. I'll just get an electric bike and do it on (inaudible). And I haven't regretted that. So it used to be the Metro, but it was more...Yeah... I don't

know what made me change my mind... Yeah... Thinking about it for two or three years and then just deciding to do it.

**00:02:46**  
Josefin All right, do you use local transportation at all after you've gotten the bike?

**00:02:51**  
EG No, I don't.

**00:02:56**  
Josefin All right, so regardless of whether... you're sticking to the bike?

**00:03:01**  
EG I am, I am. It is only for the longer distances that I use alternative transport.

**00:03:07**  
Josefin Fascinating.

**00:03:09**  
Jakub OK, well, so. Looking at your former experiences with the Metro, before you got your beloved e-bike, did it take you always wherever you wanted to go?

**00:03:27**  
EG For the most part, yes, not always. It doesn't take you to IKEA, for example, but I think for the most part it took me where I wanted to go. Yeah.

**00:03:38**  
Jakub And so how would you, for example, then in that case, go to IKEA?

**00:03:44**  
EG Take the Metro to Nørreport and then jump on the bus from Nørreport?.

**00:03:49**  
Jakub OK, so you don't own a car or anything?

**00:03:52**  
EG Yeah, we do now, but only for the last year and a half or so. And I actually don't have a driver's license, so I don't drive anyway.

**00:04:00**  
Jakub OK, that certainly makes sense. Yes.

**00:04:04**  
Josefin And when you were still using the Metro, how often did you use it?

**00:04:09**  
EG Every day. Monday to Friday and then occasionally at the weekend as well.

**00:04:15**  
Jakub One trip back and forth approximately per day then, or?

**00:04:19**  
EG Approximately.

**00:04:20**  
Jakub OK, so you were... Were you a commuter? Would you describe yourself as a commuter?

**00:04:25**  
EG Yeah.

**00:04:26**  
Jakub All right.

**00:04:27**  
Josefin All right. And were there any other situations when you wouldn't take the Metro?

**00:04:35**  
EG Other than the Metro not being able to get me where I wanted to go?

**00:04:38**  
Josefin Yeah.

**00:04:39**  
EG No, I think I always preferred Metro over bus. So if I had a choice between Metro or bus, I'd take Metro.

**00:04:48**  
Josefin How come?

**00:04:51**  
EG It's a little bit of a stupid reason. It's because on the Metro, you know where you're going to go, because I know the metro line very well. And sometimes the buses are a bit confusing. So, yeah. And also I think there's a little bit more space on the Metro. And even though it... Even though it can be very packed, very busy commuter times, but generally there's a little bit more space and they go more regularly.

**00:05:20**  
Josefin Right. So what's your general view of the Metro?

- 00:05:25**  
EG  
The general view is pretty good. It's a... I mean, it's not faultless. It can be very frustrating with all the technical faults and issues and errors, especially when you need to get to work. And then all of a sudden you find out that things are delayed or canceled and you have to stand there waiting because you expect to be able to take it within the next three or four minutes max, right? So if something happens and suddenly you get... You know... It looks like it's going to be half an hour or longer and no one really knows, and these announcements keep coming. And that can be frustrating. But generally speaking, it's... I think it's OK. Yeah.
- 00:06:07**  
Josefin  
All right.
- 00:06:13**  
Jakub  
Yeah, so I actually just... Let's circle back a little bit to what you just said about the communication. So the Metro was not working properly and there would be announcements coming. So how did you perceive the communication from the Metro personnel and the Metro company in a situation like that?
- 00:06:33**  
EG  
It's a bit hit and miss. Sometimes the announcements are quite informative and they are OK. And then there are other times when they, I'm assuming behind the scenes, they don't know what's going on either. And they don't they know they have to announce something, but they don't know what to announce and it just feels a bit like that. So it's sometimes the communication isn't great. What I'm really missing is when something goes wrong and they know it's going to be a long time and they just say - You need to find alternative transport. And I mean, that's great for people who know the area really well. But maybe they could have some kind of information at the stations where they... You know, if things go wrong, these are alternative methods, or modes, of transport that you can take - for people who don't know the system. I mean, there are a lot of expats here, so there are a lot of people who are new to the city and maybe need a bit more of a helping hand.
- 00:07:35**  
Jakub  
But basically, you are looking for additional information company if something like this happens?
- 00:07:41**  
EG  
Yeah, I think that could be really nice, even if it's just an information board on each station, the nearest buses or something. If something like that happened to me in Vanløse or somewhere, I wouldn't have that much of an idea of what to do instead.
- 00:07:59**  
Josefin  
Have you ever... What is it called... Talked to any of the personnel on the Metro or the platforms. Have you ever interacted with them?

**00:08:11**  
EG  
Yeah, a couple of times. Uh, yeah, actually. Yeah, obviously when they're checking tickets. But outside of that, I actually only really remember one time where they weren't very nice. This was years ago though.

**00:08:29**  
Josefin  
What happened in that situation?

**00:08:31**  
EG  
It was such a stupid situation. I was at DR Byen because I dropped the kids off at 'børnehave' at DR Byen. And I had my card that I needed to top up. And it was it was winter. And I had to get to Frederiksberg, of course. And I tried topping it up with my bank card. I don't know if the bank card must have been frozen or something. It just it wasn't reading it, there was no way to top it up. And then I was just sort of stumbling around the platform looking very, very confused. And I tried about four or five times... Trying to work out what to do, because there's also no... At the time there were no kiosks or anything nearby where you could buy a 'klippekort' instead. So and then the staff came up. I mean, trains came and went, of course, and then staff came up and she, sort of, little bit came to me and I went a little bit to her. And then I was trying to say to her - Look, I have this problem topping up my machine. And then she said - Did you just get off that metro without a ticket? And then she totally turned it around like I was trying to ride without a ticket. And I said - No, I've got all the receipts here showing that I've been trying to purchase or top up. And she wasn't interested at all. So that was really, really unpleasant. I think that's the only time, aside from ticket checks, that I've ever really interacted with them. So I didn't like them that day.

**00:09:58**  
Josefin  
Yeah, I can understand that.

**00:10:02**  
Jakub  
Would you recall what year that was approximately?

**00:10:05**  
EG  
You know what? It was when I was in Bachelor Admissions. So I'm wondering if it wasn't a 'klippekort' what I was trying to buy instead of a Rejsekort. I think it was it was a 'klippekort.' I think it was around 2012? 2012 or 2013, somewhere around there. Yeah.

**00:10:29**  
Jakub  
All right. And so then if we think about the staff who come to check your tickets, have you ever had any sort of proper or prolonged interaction with them?

**00:10:44**  
EG  
No, not really. No, when I had it on my phone and then it would take forever to open and then you're just sitting there very embarrassed for like two minutes. Like, come on. Yeah. Apart from that, no.

**00:11:00**  
Jakub  
And so what... How would you evaluate or describe the staff who come on the train to check your ticket? How would you describe their behavior? How did you experience it?

**00:11:15**  
EG  
It's very mixed. Some are very friendly, others, I think are very, you know, they almost treat you as you've done wrong until you've proven yourself right. And then others are really friendly and charming, I think. I don't know if they've had some kind of courses or something in the last few years, because I think especially in the last few years, it's a lot better. Certainly, like more than five years ago, I thought they could be very, very abrupt and brisk.

**00:11:48**  
Jakub  
Mm hmm.

**00:11:56**  
Josefin  
But, OK, what... What are some things that you really like with the Metro?

**00:12:03**  
EG  
I really like that... I mean, it's super convenient. I like that it runs regularly. It connects especially now with the new (inaudible). I mean, it connects a lot of the city together. There's lots of space, especially when you've got prams and children. And, you know, it's quite easy to get on and use the metro when you're juggling different prams and toddlers and whatnot, a lot easier than buses. And it's, you know, mostly - you are right - when it works, it works well. So it's mostly reliable. And it runs throughout the night. There's nothing worse than waiting 45 minutes at two o'clock in the morning in the freezing cold for a bus.

**00:12:53**  
Josefin  
Have you ever taken it at night?

**00:12:54**  
EG  
Yeah.

**00:12:55**  
Josefin  
And what's... What would you say that experience is like?

**00:13:00**  
EG  
It's it can be a bit like a moving pub at times, which is sometimes you just want to get home and you can't be bothered with the... Yeah, you can't be bothered with the loud partying people. But at the same time, I was once one of those loud partying people, so I need to just not be a grumpy old woman. So but I mean, it's fine. I've never... I don't think I've ever really felt threatened at night on the Metro. And, um, I can't think of any occasions where I felt scared or... And I think it's nice that you've got the sort of communication points where if you did feel threatened, you could get in touch with stuff. But I've never needed to use that.

**00:13:48**  
Jakub And so are there any things that you would like to see changed or improved when it comes to the Metro?

**00:14:02**  
EG That's a tough one. I mean, yes, I said the communication, when things go wrong, maybe that could be a bit more a bit smoother or a bit more efficient. But I mean, when things go wrong, of course, I can imagine behind the scenes there's a lot of crises while they're trying to work out what's gone wrong. And so I don't know what the solution would be to that and. Yeah, and I think... I think sometimes... The what can be very confusing are the zone changes as well. So between Frederiksberg and Fasanvej - obviously, there is a zone change there. So if you don't manage to get off at Frederiksberg, you've actually traveled... If you've already bought your ticket, then you've actually traveled out of zone inadvertently. And when the doors are very quick to open and close and there are a lot of people - so, I mean that can be a bit stressful, I guess. But I... Yeah... I think they could make the zone... The zone distinctions could be clearer, I think. I used to really like on the 'klippe kort' when they had that little map, so you could see with clear colors as to what was what.

**00:15:23**  
Jakub Right.

**00:15:25**  
Josefin Right, I was still actually curious about what we talked about... About the safety on the Metro, would you say you generally feel safe on the Metro regardless of what time of the day it is?

**00:15:38**  
EG Generally speaking? I think I do. Yeah.

**00:15:40**  
Josefin Yeah. And what do you think is the reason? Like, what do you think contributes to that?

**00:15:46**  
EG I don't know if it's because Denmark feels like a very safe country overall anyway, and I just think, you know... Yeah, it's very open and it's above ground. And I mean, for the most part, you know, when you're waiting on stations and so on, they are all very open. They're not sort of dark and enclosed. You don't have to go down long tunnels on an escalator. It's... So you don't feel like you're going somewhere where, you know, something could happen to you. And then you do have these communication points, which I think are really nice. But I suspect it's a cultural thing as well, actually..

**00:16:30**  
Jakub Have there been any instances where you actually would say - OK, I don't feel very safe here right now - Can you recall any experience like that?

**00:16:40**  
On the Metro?



EG

**00:16:41**  
Jakub                    Yeah, right.

**00:16:45**  
EG                        No, there's been a couple of occasions where people maybe... There have been two people have been arguing that become quite aggressive between themselves. And I don't like... I mean, that, of course, makes anyone feel uncomfortable. But no one's ever, you know, tried to really get me involved or anything. And I just sort of, you know, focus on my phone or whatever. So I don't, I don't think so. I think you can't avoid those types of people anywhere in the world sometimes, can you? But it's... I've never... it's never been anything where I thought - God, I'm never taking the Metro again.

**00:17:28**  
Josefin                    Do you ever interact with other people on the Metro?

**00:17:31**  
EG                        Only if they interact with me.

**00:17:35**  
Josefin                    Fair point.

**00:17:37**  
EG                        Not by choice.

**00:17:39**  
Josefin                    And how do you feel if they approach you?

**00:17:43**  
EG                        It depends. I mean, if they're just asking a simple question, that's fine. If they're trying to build, you know, make a new friend and sort of encroaching on the personal boundary, then it can get a bit uncomfortable. I don't like that. And then, of course, you know, kids sometimes interact, and that's fine because they are just sort of having the time of their life really, aren't they? So that's just a nice thing. So it really depends on who it is and... Yeah... How much they encroach on your personal space.

**00:18:21**  
Jakub                    Um, yeah, so just thinking generally about the design of the metro stations, platforms, trains, how would you evaluate that as a frequent rider?

**00:18:40**  
EG                        I think it's... I think it's very good. I was really surprised in the beginning that they didn't have the barriers up. But now they do, so you can't sort of jump onto the train lines or anything. And I do... I can remember when I had very small children and I had a pram, it would be very frustrating when the lifts weren't working, which could happen quite regularly, because then

there's no way of getting up there. And I do wonder how people in wheelchairs manage when that happens. Uh, I think most stations have only really got one lift, don't they? But there's no ramp or any other way for sort of mobility impaired people to access when it when the lift is not working. Yeah, but I think the designs are quite nice. Yeah. I'm just trying to think in terms of when there are a lot of people, it can feel very bottlenecky sometimes trying to get on and off. And I think part of that is because the doors are so quick to open and close. So everyone's a bit worried that they're not going to get on the train, especially if they've been waiting a long time. Um , so I don't know if improvements could be made there somehow. And it's the same bottleneck effect, actually, when you get off and you are sort of beeping out with your card. Because I suppose everyone goes for the one near the stairs, don't they? They don't go for the ones in the middle. Yeah. So even though there are other places where you can beep out, you just go for the one that's convenient to you, which is also convenient for everyone else.

**00:20:30**

Jakub

Right. Would you have a suggestion as to what or how to improve this so that the beeping out could be improved?

**00:20:42**

EG

Um. I don't know. I don't know if it's possible to design it so that you could put maybe on either side of near the stairs or, you know, along where the barriers are, you could put a couple there perhaps. I'm not sure... Or if you could... I don't know how the technology would work, but if you could do something similar to how the buses do it, so it's actually inside the Metro. So you could I mean, in theory, beep out, when you're coming up to the station that you were going to get off from so that it could recognize that. So if you stayed on and carried on, then, of course, you wouldn't have a ticket. It would be smart enough to recognize it. Yeah... I don't... I'm not quite sure, but one of the... Actually, in terms of beeping out and beeping in, one of the nice things about, for example, the underground in London is that you can often use your credit card. You don't need a Rejsekort. You just beep in with your credit card and it takes the money at the end of the journey. And in a way that would be quite nice for travelers, people coming to the city that they don't need to invest in a card. Yeah, the other thing that they do with the Oyster card, of course, is that you beep in and out on the same machine. It can recognize if you're coming or going. So you don't need to find a specific checking in and a specific checking out, which is also quite nice.

**00:22:24**

Jakub

OK, well, what about the what about the trains? How do you evaluate that as a design?

**00:22:34**

EG

Yeah, I think there are OK? I think that's got quite a nice balance between standing places and sitting places, um and you know, places for prams and wheelchairs. And so I think it's... I think it's quite a nice balance. Yeah. So I think and again, it's quite open and light, isn't it?

- 00:23:09**  
Josefin  
What about the signage both within the metro train and on the stations. How do you... how would you evaluate them?
- 00:23:19**  
EG  
I think they've improved, but I really struggled with the new Ring when it first opened, so I had to stand there looking like a complete melon for about two minutes, working out what was going on. So that was very, very confusing. I found that quite... I don't know why I found it confusing? I just did. Yeah, but I think, generally speaking, the signage is OK. I am just trying and think when you're coming into a station, sometimes it can be a bit tricky, like if you've been reading your book or your phone or whatever and you haven't really kept track. And that's one of the things... Really nice things on the nice... On the new metro you have these red lights so you can see which station you're coming into. And sometimes it can, on the old one, it can be a bit different to see the name of the station, especially if it's quite packed with a lot of people. So, yeah, you know where you are. And I'm just trying to think when sometimes it can be a bit confusing when you're if you're at Christianshavn, for example. And yeah, they change sometimes between 'lufthavn' and Vestamager. So it's like there's Vestamager one coming and it's actually a 'lufthavn'. And sometimes they seem to switch around, I feel. I don't know, but that's just me. So that one can also be a bit confusing at times.
- 00:24:45**  
Jakub  
Have you ever experienced that, for example, at Christianshavn that you would get on the... Or like on the wrong train?
- 00:24:54**  
EG  
Yeah, I have experienced that and I'm a little bit unsure if that's more Metro's or my fault, to be perfectly honest. I'm not known for having a great sense of direction.
- 00:25:11**  
Josefin  
Fair. Have you had different experiences with the different metro lines, though?
- 00:25:19**  
EG  
So between the new one... The new Metro and the old Metro, I think there's a big difference. It is definitely a lot sleeker in the new metro, which is really nice. And I really like the red light thing that tells you where you are. But it's a bit more cramped, isn't it?
- 00:25:42**  
Jakub  
The new metro, you mean?
- 00:25:43**  
EG  
Yeah, yeah, and actually the design of that... That particular train is a bit annoying with the things where you rest your bum. It's like you can't rest properly. You sort of slip down a little bit. So, you know, well either have it there or don't.

- 00:26:02**  
Jakub Is that the window bed that you are referring to?
- 00:26:05**  
EG Yeah, that little, really small ledge that you can rest your bum on. And I'm not quite sure who it helps because it's so low down. You can't really rest properly without having sort of thighs of steel and being able to squat in a permanent position for ten minutes or whatever. So it's just, you know, just go for the one or the other, I think. It's the same with the resting benches on the platforms, actually. They've got the same problem.
- 00:26:34**  
Josefin Oh, so would you say that the physical design of the whole thing influences the way you behave when you're there?
- 00:26:43**  
EG Yeah, I think so. I would try and avoid that and just stand somewhere where I could stand.
- 00:27:00**  
Jakub So have you ever discussed the Metro with others, like have you ever had a conversation about it with anyone?
- 00:27:10**  
EG Oh, yeah, every time with colleagues when it's been late or delayed or there have been issues or so. Yeah, probably if I'm being completely honest more frequently to moan than to praise. I think it's one of the... It is a bit sad maybe for the Metro, but it's one of those things where you don't notice it when it works well. But it really stands out when it doesn't.
- 00:27:40**  
Jakub Hmm, would you say that when you discuss it with your colleagues, for example, that it impacts you in any way? As a user.
- 00:27:52**  
EG I will have a grumble, and a moan, but, you know, I'd still use it the next day. So it didn't impact me up until the day I bought my bike, obviously, because it's so convenient, especially for where I live compared to where I work.
- 00:28:18**  
Josefin Anything else?
- 00:28:23**  
Jakub Oh, yes. Have you actually ever bought your ticket, as you said, we talked about the 'klippekort', but that one doesn't exist anymore. And you said you use Rejsekort. Have you ever tried any other method?
- 00:28:39**  
EG Yeah, I used to have the monthly one on my phone. So I would have... I would just do that every month, and I did that all the way up until I bought my bike instead, and now I just have a Rejsekort. The cash for the occasional journey, but I quite like the mobile phone monthly card.

**00:29:05**  
Jakub Is that embedded in the DOT app? Or how does that work?

**00:29:11**  
EG I think it is, isn't it? I think it is the DOT app.

**00:29:18**  
Josefin Now, would you ever make use of the... What's the other app called? Rejseplanen? Would you ever make use of that one when you were going somewhere?

**00:29:27**  
EG No, I don't think so. And I always think Rejseplanen comes up with weird journey suggestions anyway. I don't know - I sometimes look at the journeys and I think actually we make more sense to do that, that, and that.

**00:29:41**  
Josefin Yeah. I'm thinking, for example, like when... Whenever it was super late and it suggested to take other other means of transportation would that be...?

**00:29:54**  
EG I would have probably looked at it and considered it and gone - Nah, Metro is more convenient. No, I mean, to be fair, actually, I have used Rejseplanen when trains have been canceled or there is a problem, I have tried to find an alternative route using Rejseplanen. But I think because I live near Vestamager, it's just really difficult to get into the city if you don't use the Metro. You know, it's a bit awkward to go... To get the train into the central station and then go on to Frederiksberg from the Central Station is just such a yeah... The metro is most convenient thing from Vestamager to Frederiksberg.

**00:30:37**  
Josefin All right. I think that covers it, yeah. Nice, so, yeah, just to round off - just some quick demographic questions, just to get an idea of who is who So you were just saying... But where is it that you live?

**00:30:57**  
EG It's in Kastrup near Vestamager, about ten minutes walk from Vestamager.

**00:31:04**  
Josefin All right, and what is your occupation?

**00:31:07**  
EG 'Fuldmægtig' - just an office worker?

**00:31:12**  
Josefin All right.

**00:31:14**  
Jakub

OK, I think that covers this pretty much so. Thank you very much for doing this. Interview with us. It was really helpful. And we learned a lot. So thank you.

**00:31:24**  
EG

Good luck with your thesis.

## Appendix 2.3 - EJ Transcript

**00:00:02**  
Jakub OK, well, thank you very much for doing this interview with us. We really appreciate it that you are taking your time to speak with us today. First and foremost, we wanted to ask you if you are OK with us recording this interview and then later on using it for our research.  
,

**00:00:28**  
EJ Yes, absolutely. It's totally fine. And thanks for having me.  
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**00:00:34**  
Jakub Sure. So just to give you a little bit of an idea of what it is that Josefin and I are writing about, we are.. Our thesis revolves around the Metro in Copenhagen and what we are essentially interested in getting to know throughout this interview are your experiences with the Metro and what you have experienced as a writer. And so we have a bunch of questions prepared for you. There are some questions that might just pop up throughout the interview. And of course, if there is a question that you do not want to answer or cannot understand, then just let us know and then we will rephrase it.  
,

**00:01:16**  
EJ Sure sounds great.  
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**00:01:17**  
Jakub Do you have any questions right now?  
,

**00:01:19**  
EJ No, I'm ready to go.  
,

**00:01:21**  
Jakub Awesome.  
,

**00:01:21**  
Josefin All right. Perfect. Yes, I. So to start off, when you need to go anywhere in Copenhagen, what's your main way of transporting yourself there?  
,

**00:01:31**  
EJ When I lived there, I was walking. When I went to work, it was Metro.  
,

**00:01:37**  
Josefin All right, would you ever use anything else but the Metro?  
,

**00:01:41**  
EJ Yeah, the buses and biking.  
,

**00:01:50**  
Jakub What would you say the split was between these different means of transportation, like how frequently would you take each one of them?  
,

**00:01:58**  
EJ Hmm, I would say walking 50 percent, metro 20 percent and biking 20 percent and then 10 percent bus, rarely took the bus. Yeah.

,

**00:02:15**  
Josefin  
Were you always able to go where you wanted to using the Metro?

,

**00:02:22**  
EJ  
Uh, kind of, but then sometimes I needed to switch to a bus, so. It took me very far, but sometimes I needed to walk or take the bus the last distance.

,

**00:02:38**  
Jakub  
Would you say that you are.. That you are overall satisfied with the reach of the Metro network?

,

**00:02:46**  
EJ  
Yes, absolutely, because I didn't go that far out of Copenhagen, so it got me where I needed basically.

,

**00:02:56**  
Josefin  
And so which were some situations when you then didn't take the Metro?

,

**00:03:05**  
EJ  
When I mean, I felt like the metros had trouble, sometimes the lines were down, so then I had to bike instead, the distance where I usually would take a metro, like going to my internship that was kind of out of the city, then I would bike instead. That distance of the Metro wasn't running properly.

,

**00:03:28**  
Jakub  
And how did you find out about the metro running or not running? How did you figure it out?

,

**00:03:34**  
EJ  
Normally in the station when I got there, the information on the main signs.

,

**00:03:43**  
Jakub  
OK, so you would normally go to the station and then first figure out there 'oh, I can take this now'?

,

**00:03:50**  
EJ  
Yeah, because I didn't know which app to use. And I was really confused about the different companies that run traffic in Copenhagen.

,

**00:04:00**  
Jakub  
Hmm.

,

**00:04:02**  
Josefin  
All right, so what's then your general view of the Metro?

,

**00:04:07**  
EJ  
Clean, usually spacious unless it's like peak hours, like generally, like very modern compared to Stockholm. What else? Um. Just like safe, I guess. A very smooth experience. Yeah, these are some some words that pops up, I guess.

,



- 00:04:42**  
Josefin Right, and you were hinting at it that compared to Stockholm, how would you say the metro here is compared to there?  
,
- 00:04:53**  
EJ First off, it's way easier to take the metro in Copenhagen because in Stockholm, we have to have to blip your card everywhere, and that takes time. But it's such a nice way that you just walk into the metro station without having to pull up your card. So that's one perk of the Copenhagen metro.  
,
- 00:05:13**  
Josefin But you mean you have to blipp to access it in Stockholm?  
,
- 00:05:17**  
EJ Yeah exactly, you have to go through the.. I don't know what.. Like the 'spärrar', I don't know what they're called, like to open up. That that takes a bit time and. The.. I feel like, the air quality in Stockholm Metro is really awful and it can be smelly and it's usually very, very crowded. And yes, those are a few things that I don't like about the Stockholm Metro, whereas in Copenhagen, since it's a pretty modern metro, everything is like cleaner and it's more accessible in a way. I feel like wherever you are in Copenhagen, there's always a metro nearby. In Stockholm, there.. Sometimes you have to walk the long distance.  
,
- 00:06:11**  
Jakub All right, awesome. So what are some of the things that you really enjoy or like about the Metro network in Copenhagen?  
,
- 00:06:23**  
EJ I like the.. Like the general vibe, because I feel like the.. What is it called like.. Departure come pretty often, which means that when I travel, at least, it wasn't super crowded all the time, which it can be in Stockholm. I like the stations are fairly small, like the trains themselves are pretty short. In Stockholm, they're really, really long and you have to walk like distances and like, yeah, the general look of the metro and also enjoy like the circle layout of the metro, although that could be a bit confusing because you didn't know like where you were going to hop on depending on what direction you were going, if you didn't really know the city. But like, it covers the areas that you want to get to. And yeah. So those are a few things that I like about the Copenhagen Metro.  
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- 00:07:28**  
Josefin Well, then, if you could change anything with the Metro, what would that be?  
,
- 00:07:33**  
EJ Well, since I come from Stockholm, all the metro stations look very different because they have focused a lot on art in the metro stations in Stockholm. So each station has a very different look. But in Copenhagen, I could feel confused because they all look identical, basically. So sometimes I didn't know which station I was at or like where I ended up. So that kind of.. That everything looks the same, as someone who's new in Copenhagen, at least, that could be a bit confusing. Um, yeah.  
,

**00:08:09**  
Jakub Does the visual aspect of the station help you actually navigating?  
,

**00:08:15**  
EJ Um, yeah, I guess because it's very.. It's very spacious and like it's high ceiling, so you get like an overview over what's going on in the station, which also helps you if you want to take the elevator, if you want to take the escalator, you can kind of calculate where to go to save time. In Stockholm, it's way more compact and you can't really navigate as easily.  
,

**00:08:48**  
Josefin All right, so continuing on that a bit and describing the physical design of the of the situation, what's your opinion about the trains?  
,

**00:08:58**  
EJ Well, they kind of feel a little bit like airport shuttle trains. To me, they don't really feel like a classic metro, but I don't have any value added to that. But I like the layout of it, that there are plenty of seats. And I mean, they're kind of plastic. From what I remember, the seats weren't that comfortable. And Stockholm, they're made out of textile and like soft, soft seats. So if you're going a long distance, then I would prefer Stockham seating's to Copenhagen trains. But general, like clean, no graffiti, not a lot of advertisement. What I remember was on the like screens, in Stockholm we have a lot of print advertisement all over the train. So those are a few other things.  
,

**00:10:00**  
Jakub Have you ever or.. How would you evaluate the communication that you could see on the trains or on the metro station platforms in Copenhagen that comes from the Metro company?  
,

**00:10:20**  
EJ I actually can't recall if they.. If the messages were both in Danish and English, but I remember that I felt confused sometimes when whenever there was a stop, somewhere like that, the metro didn't stop at certain stops. So that could definitely be improved, especially as a foreigner. But otherwise, the main information, I thought was well presented. You could see the entire line and what stop you were heading towards. And so that was that was fairly clear. So you could navigate yourself on your journey.  
,

**00:11:04**  
Josefin Did you ever get stranded on the Metro?  
,

**00:11:10**  
EJ No, I didn't. I just went in the wrong direction a few times.  
,

**00:11:15**  
Josefin What do you think was the reason for that?  
,

**00:11:19**  
EJ Hmmm, I think I was just tired and confused at the end.. Like, when you take the Metro, you see the end stop, that's the name of the metro line. And I mix them up, I guess.  
,

**00:11:36**  
Josefin All right.  
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**00:11:41**  
Jakub So would you say overall that the metro in Copenhagen operates well?  
,

**00:11:48**  
EJ From what I remember, yeah, it was only a few times when it didn't run as it should. So, yeah, generally, yes.  
,

**00:12:00**  
Josefin When you were using the Metro, how did you normally get a ticket, like buy one?  
,

**00:12:07**  
EJ I had a ticket on my phone. I think if I remember correctly, because I bought a ticket, I was commuting from Sweden. So I had a ticket that covered both Skåne and the Copenhagen area. So I had that ticket on the phone. And then if I remember correctly, I bought the second ticket also in the phone through some of the operators.  
,

**00:12:29**  
Jakub Um, yeah.  
,

**00:12:33**  
EJ But sometimes I bought a single ticket in that.. If I had, like visitors, we would buy single tickets in the machines, in the train stations, in the metro stations.  
,

**00:12:45**  
Jakub Have you ever used the DOT app to buy a ticket over your phone?  
,

**00:12:53**  
EJ Um, no.  
,

**00:12:58**  
Josefin Did you ever experience any issues when you were getting a ticket?  
,

**00:13:02**  
EJ Um. I don't think so, I mean, I thought it was something I had to figure out how to get like a 30 day ticket. Now I don't even remember which operator I got it through. But I mean, I had to ask around a little bit what kind of ticket to get and also how much I was going to use it and so on. That was a bit confusing. But I remember I think I finally figured it out after a while after asking locals.  
,

**00:13:34**  
Josefin Do you remember, did you get the ticket, the one from Skånetrafiken or the Danish one?  
,

**00:13:41**  
EJ I had the Skånetrafiken ticket for like one month, and then I had another ticket from another Danish operator, the main one. I can't remember the name of it.  
,

**00:13:54**  
Josefin All right.  
,

**00:13:59**  
Jakub So have you ever interacted with any personnel when taking the Metro?  
,

**00:14:06**  
EJ The people who control your tickets maybe like three times.  
,

**00:14:12**  
Jakub And how would you evaluate that experience?  
,

**00:14:16**  
EJ They were really nice and yeah, it was overall like a good experience compared to Stockholm, where they come like six people at once and they also have like security guards with them, and it creates a kind of hostile vibe and they are generally very rude. So in comparison to the behavior of the staff in Copenhagen, it was way nicer in Copenhagen.  
,

**00:14:45**  
Josefin And did you ever interact with other writers on the Metro?  
,

**00:14:51**  
EJ No, I didn't  
,

**00:14:53**  
Josefin Did anyone interact with you?  
,

**00:15:00**  
EJ No, I don't think so, but from what I remember, just like exchanging looks like.. But no, I didn't make any friends on the Metro, unfortunately.  
,

**00:15:14**  
Jakub Do you generally feel safe or on the Metro?  
,

**00:15:18**  
EJ Yes, I did, definitely.  
,

**00:15:23**  
Josefin What was it that you think made you feel safe there?  
,

**00:15:28**  
EJ Most people were generally behaving I mean, I also traveled during peak hours when a lot of people were on their way to work. Everyone was like sober and nice. I didn't ever take the Metro during my late night time, so I can't really compare with that. But so I think that's also the I mean, the hours when I travel, I think that affected my feeling of being safe.  
,

**00:16:06**  
Jakub And so looking at the at the design of the Metro, for example, to the trains, the stations, the signs at the stations, how would you overall describe and evaluate those?  
,

**00:16:23**  
EJ  
Like minimalistic, modern, straightforward. Maybe not so inviting because it's pretty anonymous. But, yeah, user-friendly, I remember there was good signs from like.. On where to go, depending on what street you wanted to go up to. So which exit to use and so on.

,

**00:16:53**  
Jakub  
Yeah, what would you say would make it a bit more inviting and less anonymous?

,

**00:17:01**  
EJ  
Hmm, yeah, maybe do the Stockholm way and have like temporary artists display stuff like using the high.. The high ceiling space or just like use the space without interfering with the.. Like the user experience of the journey, but maybe to give each station its own, its own kind of look so that maybe that represents the certain area that you're exiting into, like a certain neighborhood or so on. Yeah, that would be more inviting because then at least as a new person in the city, you would also get a better feel of where you are at in the city, because when you take the bus, you see the city, you get to know the city in a bit different way when you're underground. It's a bit confusing because you just hop on and hope you get off at the right place. So something that would also make you remember 'OK, this is this stop and I associate it with this part of Copenhagen'. That would be super nice for me, I would say.

,

**00:18:16**  
Josefin  
Would you say that the physical design of the station is in the metro in general, influenced the way you behaved there?

,

**00:18:23**  
EJ  
Um, yeah, kind of, yeah, because it's like it has a pretty serious tone and everyone is just minding their own business and, you know, not a lot of social things going on generally. So, yeah, I would say that I kind of got a bit affected from that kind of look of the stations.

,

**00:18:50**  
Jakub  
What line of the metro would you normally take?

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**00:18:57**  
EJ  
When I lived at Nørreport and.. God I don't remember the line names, but I always went towards Copenhagen Lufthavn to go to work in Amager, that was the line I usually took. Yeah.

,

**00:19:13**  
Jakub  
And could you, or do you see any differences between the different lines that operate within Copenhagen?

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**00:19:25**  
EJ  
Yeah, I mean, the circle line and the ones that just go straight, those were quite different also because the circle is so new. So a slight difference, but they still kind of have this.. Give you the same impression on the look, on the look and so on, from what I remember, the circle one was brighter and the other older ones, they were more dim in the light generally. So it was like not dark, but like darker. Yeah.

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**00:20:02**  
Josefin Did you ever discuss your experience with the Metro, with other people?  
,

**00:20:08**  
EJ Yeah, with some other expats in Copenhagen.  
,

**00:20:13**  
Josefin Yeah, do you remember what you were discussing then?  
,

**00:20:18**  
EJ Yeah, like the sign of the stations, because we compared it to other cities and also things we had seen on the Metro. I hadn't had those amazing experience of seeing, like drunk people running in the train, bumping their head against the glass and so on. But there were some urban legends that circulated. Yeah.  
,

**00:20:47**  
Josefin But was this, like friends of yours that you were talking to then, or was it like a group of some sort?  
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**00:20:53**  
EJ Only friends.  
,

**00:20:55**  
Josefin OK.  
,

**00:21:02**  
Jakub Uh.  
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**00:21:07**  
Josefin I think that was most of it. Well, yeah, just to wrap some up to get some demographic information and some knowing who's who. Where do you currently live?  
,

**00:21:21**  
EJ Stockholm. Sweden.  
,

**00:21:24**  
Josefin And what's your occupation?  
,

**00:21:27**  
EJ A digital marketing person.  
,

**00:21:31**  
Josefin While you were here, how many times per week would you say you took the Metro.  
,

**00:21:38**  
EJ Uhm, maybe 10 times per week?  
,

**00:21:45**  
Josefin OK, like a round trip or one way?  
,

**00:21:48**  
One way.

EJ

,

**00:21:49**  
Josefin

OK, cool.

## Appendix 2.4 - IL Transcript

- 00:00:08**  
Jakub
- Yeah, OK, but thank you very much for being willing to participate in our interview. We are just going to tell you a little bit about what we are doing and also give you some sort of like an idea of the process of this interview. So basically, what Josefin and I are writing about is about the metro here in Copenhagen, the Metro network. And what we are essentially interested in hearing about are your experiences. So that is what it's going to revolve really about. If you do not understand the question or anything, you don't have to answer it. It's totally fair to say that you don't understand and we can try to figure it out. If there is anything else, then just let us know about that.
- 00:00:58**  
Josefin
- Do you have any questions?
- 00:00:59**  
IL
- No.
- 00:01:01**  
Jakub
- OK, then we are going to ask the questions.
- 00:01:05**  
Josefin
- Right. Well, to start off. How do you transport yourself around the city when you're here? How do you get around?
- 00:01:18**  
IL
- I would say mostly walking. Uh, but, um, when there is like.. If I have to go to, um - Nørrebro - then it's too far. So I take the Metro Ring Line thingy. And, um, yeah, I don't know, but I would say like a combination of walking and taking the metro. Yes.
- 00:01:56**  
Jakub
- Are there any particular reasons why you would be using public transportation?
- 00:02:05**  
IL
- I think there's like two things in mind. Like, if it's reliable, uh, and... If there's enough... Enough trains or buses or whatever, the lines that come back in, like times that I don't have to plan too much ahead. So if I give the example of the Metro that it goes like every two minutes, then I feel like it's more intuitive. You can just decide to take the metro and you just go. So it would incentivize me to use it more, I guess? Because I don't have to plan ahead, but in terms of other public transportation, I guess it really depends on the length, the duration of the trip, and also the accessibility of the station.
- 00:02:55**  
Josefin
- Would you say the metro like it takes you where you need to go?



- 00:03:01**  
IL  
From what I like... My use of it, I still think that I still have to walk a little bit more, I don't think I ever use the Metro, if it was like two minutes away from me, like like I said, at least like five minutes, ten minutes, from where I want to go.
- 00:03:25**  
Jakub  
Do you have like a reason for why it is that you use the Metro as compared to other means of transportation that are available in Copenhagen?
- 00:03:36**  
IL  
Well, it's fast. It obviously bypasses all traffic, so you don't have to think about traffic. Um. And it's still kind of a large network that it goes to quite a lot of places in the town, that it's not like a train where it stays like in certain central areas of the city, but you still have to either bike or walk a long, long time, I feel like the Metro is still more connected than a train or it's not reliable on the traffic like buses, for example. So I think this is the main reason why you take it. And again, you also know it is coming. So even if there's a lot of people, you can wait and you don't feel annoyed that you have to wait.
- 00:04:27**  
Josefin  
How often would you say you take the metro?
- 00:04:32**  
IL  
Well, not very often. I would say like it's just a personal choice, but I still prefer walking if I can, because I just I don't know... I just love walking and feeling the air. I mean, still, a metro is underground and you can't see anything from the metro. It's just dark in the tunnel. Sometimes it's a cool tunnel but it is still a tunnel!
- 00:05:03**  
Josefin  
That's true.
- 00:05:08**  
Jakub  
So would you say that when you use the Metro, if you're already taking it, let's say that's the scenario here, would you say that it normally gets you from A to B - so does normally get you where you want to go?
- 00:05:25**  
IL  
Yeah, I would say so, I mean, otherwise, I would just... If it would be totally inefficient, like if it would just be in a very like a station that is just nowhere, then I will not take it. Obviously, if there's a place I want to go and it's in the proximity of the station, yes, I will take it.
- 00:05:45**  
Josefin  
Are there any situations where you were like - Nah, I don't want to take the Metro - even if you could?
- 00:05:51**  
IL  
It's a good question. Um. Well, it's very, uh, it's very 2020, but, um, now we try to avoid, uh, people, so if, uh, so that is also one element. But also, I feel like in my mind, if, I think - Well, I can walk this pace - and the weather is normal, then I would walk even if I can take the metro. And sometimes

if, uh, like a place I want to go is still too close, if it takes me like ten minutes to walk, it's still better to walk because going down the stairs and, uh, escalators, waiting for the train, still usually you do wait for even one minute and then going up again and also loading the ticket or whatever. It still takes some time, not just a trip. So even if it takes the same amount of time walking or taking that, I just prefer walking.

**00:06:58**  
Jakub

So what would you say, your general view of the Metro is?

**00:07:05**  
IL

My impression from it is that it's really efficient and I like that it's also automatic, autonomous, I mean, um, so it can run all the time. Uh, so I feel like it's really good to have this this kind of system. And I can tell from my experience coming from Israel that we don't even have a metro. Um, and even if and even like our trains and our buses, they still stop at a certain point in the day and so I like that the Metro is always running. And I also feel like generally the stations seem to be well maintained. So I don't feel so unsafe. So I think this is also my perception that it feels safe.

**00:07:54**  
Josefin

Right. Do you have, like any specific experiences with it that you like, recall like some really good experience?

**00:08:07**  
IL

Hmmm, I think there was one time where, um, actually before, uh, Denmark closed its borders. And I had to come to go to Copenhagen a night before I took my my flight, and then I had to go in the middle of the night to the train, to the airport. So I took the metro for the airport and I felt like it's great that it's there. And I wouldn't have to take a taxi or something that would cost me a lot. And also, I feel like it also this time at night, it's quite empty. But then it was not scary. Even if it was dark, I guess it was just light enough - the train itself. And if I'll take example, the station of the airport is also very it's just there like you just take the stairs and you're in the airport. I also think that was a memorable experience.

**00:09:02**  
Jakub

Now, you don't even have to take the stairs. There's a bridge to the airport.

**00:09:06**  
IL

Oh, nice.

**00:09:10**  
Jakub

So what you are saying is that your experiences with the Metro are in general those of safety and convenience. Is that what would... Would it be a reasonable description?

**00:09:26**  
IL

Yes. And yeah, safety and convenience, that's good, and also. I don't know, like the part of it, it's autonomous, it's also like the feeling of it is feeling - it feels new, like it's technological. It's I don't know. So I feel like

it's also (inaudible). It's not just taking a metro. Like I also took the Metro in Barcelona. It has a different feeling. It's not the same feeling.

**00:09:51**  
Josefin

So it's like an experience in itself?

**00:09:53**  
IL

Yeah. It just feels. Like high end because it's autonomous.

**00:10:04**  
Josefin

Well, on the other side, then, do you recall any, like, really bad experience, where you were like - no. Or any situation where you're just like, oh, not having it.

**00:10:21**  
IL

I guess when there is too many people like waiting in the station and also sometimes it can be really packed with people in normal times, so. Yeah, then it's then this situation is even more of an incentive to just I would just walk if there's like too many people because the stations are still not that big. So it could get packed quite quickly. Yeah. And also the trains themselves are not big, they're not long, they don't have a lot of carriages so there's a limited amount of people that can get in. So sometimes I would just, just give up.

**00:10:55**  
Josefin

What is it they like. What do you think it is that makes you feel that you're like just - no - like about the situation?

**00:11:02**  
IL

I don't like the feeling of like crowdedness and just. Like, I don't know if you also feel like it's also it's still it's a metro, it's underground. So if you feel you cannot breathe and you're underground, it's like double the feeling. So. I think that's yeah, that's the downside of it.

**00:11:27**  
Jakub

Is that the only, let's say, more negative experience that you have experienced because of Metro?

**00:11:36**  
IL

Yeah, because I don't I don't recall something really negative that happened.

**00:11:39**  
Jakub

It doesn't necessarily have to be something very negative. But let's say an experience that kind of stuck with you, something where you, where you would say, OK, this was a memorable experience that I just did not forget. Can you recall anything like that? Be it positive or negative, if you put it in those terms.

**00:12:00**  
IL

Memorable experience... Nothing comes up to my mind.

**00:12:15**  
Josefin All good.

**00:12:18**  
Jakub So then if we just look at the totality of your experiences. Do you think the Metro operates well?

**00:12:26**  
IL Yeah, I would say so.

**00:12:30**  
Josefin Have you ever gotten stuck on it?

**00:12:32**  
IL No thank god.

**00:12:36**  
Josefin I see, lucky you!

**00:12:45**  
Jakub How would you normally get your ticket when riding the metro?

**00:12:54**  
IL Through the machines.

**00:12:59**  
Jakub So you mean the physical machine where you would buy it?

**00:13:02**  
IL Yeah, yeah. I'm just thinking, like, if I think about it, like the DSB app is not good, so I would not - I was not using them.

**00:13:13**  
Josefin In what way is it not good?

**00:13:16**  
IL It's it's always like malfunctions sometimes and it's like it crushes. And I know there's there's another app for the metro like DOT or something.

**00:13:26**  
Josefin Yeah, exactly.

**00:13:27**  
IL But I also think I tried to use it also. Uh, I wouldn't be like it wasn't intuitive, it was very laggy. Yeah.

**00:13:36**  
Josefin Have you ever experienced any issues with getting the ticket the way that you normally do - like the machines?

**00:13:42**  
IL I don't think I had a problem with the machines, but it's sometimes even if the Metro still comes every two minutes, it still feels stressful when you see a train. Yeah, it takes longer.

**00:13:53**  
Josefin That's true.

**00:13:57**  
Jakub But so you you've tried using the apps to get your tickets?

**00:14:04**  
IL Yeah, and I feel like they're really not comfortable for use.

**00:14:06**  
Jakub Mm hmm.

**00:14:10**  
Jakub Have you ever, when taking the Metro, interacted with any of the personnel?

**00:14:18**  
IL Just rarely when they checked my ticket, but that's all.

**00:14:22**  
Jakub And how would you describe that given situation? How did it make you feel? What was going through your mind?

**00:14:32**  
IL I think they were pretty neutral, like I didn't think they're extremely nice or extremely rude. I don't know even if they had a uniform or anything, I'm sure they did, but I just don't remember anything.

**00:14:47**  
Josefin Mm hmm. Do you normally interact with, like other people on the Metro as well, or?

**00:14:54**  
IL I try not to.

**00:14:58**  
Jakub Why is that? Can you expand on that?

**00:15:02**  
IL I don't know. I feel like you don't want to interact with people on public transportation in general. I feel like the positive side of public transportation is, you know, when you're not in control, so you can just not think about

anything and just like enjoy the ride or just give in to the ride, and that you like, and if people interact with you, it's like... I don't want to like... I just want to like..

**00:15:26**  
Josefin  
If someone would come and interact with you. What would that.. What would the - what effect would it have in your experience?

**00:15:33**  
IL  
Like - What do you want? I feel like I mean, it's not that any interaction is bad, but I don't know. I feel like it would be unusual if someone interact with me and I would definitely remember it.

**00:15:43**  
Josefin  
OK. Do you generally feel safe on the Metro, though?

**00:15:49**  
IL  
Yes, yeah.

**00:15:56**  
Jakub  
Are there any particular aspects of the metro stations, whatever it may be, that make you feel safe? Is there anything where you can say - this is what contributes to this?

**00:16:08**  
IL  
I think it's the amount of light also in the train and the train is very light and like that, there's a lot of light in the train. Um. And. I guess also the fact that it's not run by anybody, it is just automatic, it's basically a computer runs it. Then I feel like there no there's no place for human error. And somehow, I guess it just contributes to a general safety feeling, even if it's not related to the people that are in the train. I don't know... It's just, um... The smoothness of it, the doors that open at the exact place, that they mark it where to stand and and people usually listen to this, um... Like, maybe it's the way it's designed before you embark the train. I don't know, I never thought about it too much.

**00:17:19**  
Jakub  
What do you mean, what did you not think about?

**00:17:23**  
IL  
About how I feel like... It takes me like a little bit effort to...

**00:17:28**  
Jakub  
Oh you can take all the time you want if you want to think about it more. Feel free to take more time.

**00:17:35**  
Josefin  
Have you ever reflected more like in that same regard, so like the physical design of all of the different parts that you come in contact with, so like the the signage, for example, have you ever reflected on on their design and what does what what it does to you?

- 00:17:53**  
IL I feel like it was more unconscious, but I guess it did contribute to a certain feeling. I don't know... I don't even know how to describe it. But even the shape of the train gives you a certain feeling - like it has a very like... It's it's a bit round, but it's also squarish? It is weird, but some... And even the sound of the train, it's almost like you get familiar with the sound of the train. So maybe this familiarity is also contributing to this safety one feels, I don't know now.
- 00:18:28**  
Jakub So is that is that a positive feeling, would you say?
- 00:18:30**  
IL Yeah, it's like you recognize you can hear it's.. You.. It has a certain sound.
- 00:18:35**  
Jakub OK. And in terms of the station design, is there anything that it evokes in you?
- 00:18:43**  
IL I feel like the station design is really, really predictable. Like most stations look kind of the same or I mean, they have the same layout. It is always like the escalators, like the double escalators on both sides, and it's a very like narrow hallway and there's always two sides of the doors, the glass doors with different directions of the train, like in every station is like the same. So I guess you could be also, if you're not familiar with it, you could be disoriented even if the stations have names and all. But like, I don't even remember which station it is. But when it is a red wall in the station, then it's like Oh, something unique. But usually it's just regular like station colors of gray and. I don't even know what the floor from. I don't know what the material is.
- 00:19:41**  
Jakub So have you ever gotten confused when taking the Metro based on your experiences?
- 00:19:49**  
IL Yes, I think I never confused to a point where I would go on the go out in the wrong station. But yes, I would be like, wait, where am I?
- 00:19:58**  
Jakub And what would you attribute that confusion to?
- 00:20:02**  
IL I feel like because of because it's a metro and you cannot really see your surroundings, so the station is the only mark of your location. This is the only way you can orient yourself around. So if the stations are too similar, it's going to get really confusing. So I guess that this is why I said that if there's a certain color, then you could associate with the certain station. But if there is not this like a special mark, then it's confusing.

- 00:20:39**  
Jakub Would you, in your opinion, say that the stations are accessible, are they not?
- 00:20:50**  
IL I would say they are accessible. I don't think I have had a problem with accessibility of the station. I don't recall anything at least specific.
- 00:21:03**  
Josefin You know, with the the different metro lines, have you ever noticed, like, a difference between them or, you know, are they all the same or would you say a there's a difference? You know, if you take the Circle Line or if you take the other one, is it all the same or not?
- 00:21:20**  
IL No, I think there is a difference, especially because I think it's number two. It also goes out of the... Like over the ground. Uh, so it does have a different feeling to it because you see your surroundings. And the circular, like the Ring Line is basically it also like it also always comes back to the same station eventually. So in a way, if you miss... If you take the wrong direction, you're like - oh shit - but still, it's - OK, I just wait until it gets to my place.
- 00:21:51**  
Jakub So now, thinking about the whole atmosphere, and the layout of the metro, the stations, and so on. Would you say, from your experience, that it has influenced or does influence your behavior?
- 00:22:18**  
IL I would say maybe in some unconscious way, because it's so predictable and there's a certain I mean, also with the signage and the markings on the ground where you need to stand and where you need to wait, and every station has this clear signs of when the train is coming. And I feel like also maybe because it's narrower then you don't want to stay there for too long. So it also affects your behavior there. I feel like maybe you want to be quieter because you don't want to make just like it's already too narrow and underground, so you don't want to feel like overburdened with the, um, how would I say it? Too much sensory. Uh. Sensory... input.
- 00:23:14**  
Josefin OK. Did you ever discuss your experiences that you had with the Metro, any frustrations or anything like that with someone else?
- 00:23:23**  
IL No, no, no.
- 00:23:28**  
Jakub Are there actually any aspects of when you take the Metro as a rider where you think, OK, this is nice, this is really well done?
- 00:23:45**  
IL I don't know, I think I just like the general design of the trains because...I wouldn't say it feels like a spaceship, but it's almost like because it's so like technological and automated, then you feel like a little bit in the future.



**00:24:05**  
Josefin Well, on the same hand, did you ever have any time where you said, like, if I if I was working, I would like if I was working for the Metro company, I would definitely change this. Or like, why don't they do that?

**00:24:16**  
IL Better seats.They're they're very like plastic. It's not nice to see them take. This is one of the um.

**00:24:25**  
Jakub Could you elaborate on that? In what way are they not nice to sit on?

**00:24:28**  
IL The are very like, the seats themselves, are very hard and it doesn't feel inviting... Like the material of it because usually and for example in trains or in buses you have a certain uh cushion or something that is nice for your butt you know. There's nothing nice for my butt. And also the colors of the trains are usually very, um, they're very neutral. So it's gray and white and the seats are gray. And I don't know, maybe it's also like mentally, if you like, cold.

**00:25:12**  
Jakub Anything else, what you would change?

**00:25:16**  
IL Hmm.

**00:25:17**  
Jakub Or anything that you would commend the Metro for?

**00:25:29**  
IL I would say give every station a certain mark, maybe if it even can be like a sign, a color, um, whatever it is, something that you could recognize not just by the station's name, but because something like a color or a sign or a symbol you can straight away recognize, like you don't even need to think about it. So I feel like maybe there could be a better way for people not to get confused.

**00:26:03**  
Jakub Do you have anything else that you would want to add, anything that runs or is currently running through your mind?

**00:26:15**  
IL No, I don't think so.

**00:26:19**  
Josefin Just a few rounding up questions then, just to get an idea of your situations.

**00:26:26**  
Where do you currently live?

Josefin

**00:26:29**  
IL In Lund, Sweden.

**00:26:30**  
Josefin That's absolutely OK.

**00:26:34**  
Josefin So you would say, yeah, you're, um, you don't take it regularly here, but it's more of a...

**00:26:39**  
IL Yeah, but I would say a few times a month at least. Yeah.

**00:26:44**  
Josefin OK, and what's your current occupation?

**00:26:47**  
IL Student.

**00:26:48**  
Josefin OK.

**00:26:50**  
Jakub No need to be shy about it.

**00:26:51**  
Josefin We all are.

**00:26:55**  
Jakub And if you say had to think how many times per week you use the metro, on average, what would that total be?

**00:27:06**  
IL Per week on average then I would say.

**00:27:10**  
IL Once per week.

**00:27:14**  
Jakub Back and forth, that being or just one trip?

**00:27:16**  
IL Back and forth.

**00:27:19**  
Jakub

OK, well, great, thank you very much. That was the... Those were all the questions that we have prepared for you.

**00:27:25**  
IL

Thank you.

**00:27:26**  
Jakub

I'm very thankful that you helped us with our research.

**00:27:30**  
IL

My pleasure.

## Appendix 2.5 - JR Transcript

- 00:00:09**  
Jakub OK, so thank you very much for coming to this interview with us. I just want to ask you as the very first thing, if you are OK with us actually recording this interview and then transcribing it.
- 00:00:24**  
JR Yes, you have my full consent to interview and record and transcribe.
- 00:00:29**  
Jakub OK, thank you so much. So just to give you a little bit of an idea what Josefin and I are writing about, we are interested in hearing your experiences with the Metro in Copenhagen. And yeah, essentially we just want to have a pretty open discussion about that. We have some questions ready for you and then we'll see where it goes. Should there be a question that you don't understand or you don't wish to answer? Just say so. And then we skip it or we try to rephrase it.
- 00:01:08**  
JR Yes.
- 00:01:08**  
Jakub And yeah, if the video gets stuck or something lags, then let us know. Do you have any questions right now?
- 00:01:18**  
JR No, all is clear.
- 00:01:20**  
Josefin All right. Well, let's get started then. So basically when you need to go anywhere within Copenhagen, what's your main way of transporting yourself there?
- 00:01:30**  
JR Uh, it depends, but if it's just, yeah for context, I live in Ørestad, so Metro is really convenient to go anywhere downtown and to work, for example. Uh, so a public transport, it is by far the metro. I cannot remember the last time I was in the bus and else. I also tend to take the car.
- 00:02:02**  
Jakub So thinking about your public transportation behavior in general, do you have a particular reason why you take Metro compared to other means of transportation?
- 00:02:14**  
JR Uhm, location and convenience, especially in the morning rush. It's nice to be on the tracks under the ground rather than in the morning traffic. And the Metro is close and can bring me and bring me to work, so it's yeah, it's out of convenience, uh, and to the fact that, I mean, the Metro net suits perfectly my needs.
- 00:02:45**  
Josefin All right, so would you say that you can always get where you need to go by using only the Metro?
- 00:02:54**  
JR More or less, yes. I mean. With the base in Ørestad, I can at least always come home as long as I make it to Nørreport or one of the other ones. Uh, so, I mean, the metro is especially with the city ring it has definitely become.. It's very yeah, yeah, and again, convenient to make sure that I can get where, you know, get where I want to go and also with very.. Uh.. I don't need to wait forever for a metro train unless something is wrong.

And that's really, really nice as well as I don't really need to time anything. So I think that's. Yeah.

**00:03:42**  
Josefin

When are some situations when you wouldn't take the Metro then?

**00:03:46**  
JR

Um.. Um.. Um, for larger shopping and for example, um, my wife is Polish, and we sometimes go to the Polish store up by Forum and although the Metro is somewhat close, it's nice to take the car there. For example, I parked right next by and don't have to worry about making it home before the frozen stuff is defrosted. And of course, I mean, IKEA trips. I don't know if you've tried IKEA trips in the Metro, but they are very annoying with the blue nets and making sure your lamps don't break and the glasses are intact and everything. So for any larger.. Or anything larger.. Any larger shopping, I would.. I would not take the Metro. Also I find people annoying when they bring too much stuff in the Metro. But I don't know if, you know, I would take the car before that. I would arrange driving somehow.

**00:05:14**  
Jakub

OK, so how often would you say that you take the metro on average per month?

**00:05:24**  
JR

Uh, yeah. So I don't really leave Ørestad due to the pandemic. But in a normal month, if we don't look at.. And we assume that the shops will be opens at least, and I will sometimes go to the.. Sometimes at least go to the office. It would be, like five to eight round trips a week, so like between. Yeah, 10, 10 and 16 trips, 10, 15 trips, something like that.

**00:06:03**  
Jakub

Mm hmm. OK.

**00:06:08**  
Josefin

And what would you say your general view of the Metro is?

**00:06:15**  
JR

Uh, I really enjoy it and I really find it.. I find it reliable and, uh, reliable and timely. And of course, everybody has stood in, waited for some metro trains that never came, or it has been some kind of, uh, some kind of problem. But I think compared to the s-trains, for example, I don't feel it's a big problem. Um, so I think reliable and.. Reliable and convenient is like my overall thing. And then, I mean, there's always. Like, it's nice that most of the stations underground so don't need to stand outside-outside in the winter. You can.. They are well lit, there's not a lot of things going on. Like there is Nørreport. It's often just the metro station and your are.. Yeah. So, yeah. So convenient and.. Convenient and reliable.

**00:07:18**  
Jakub

OK, cool. So basically to expand a little bit more on that, what are some of the things that you really enjoy about the Metro or taking the Metro?

**00:07:31**  
JR

Um, I think the, um, the rate of the, uh, how you say that the, like, the frequency of the trains is really nice and even if I go out the door a little later I and I missed the first one, there would be three to five minutes until the next one, meaning that I will never be more than three to five minutes late for anything which I think is manageable. And I mean, growing up in a small town, it's also very, very, very nice to be able to be somewhere somewhat precisely and predictable and not being there either half an hour

too late and half an hour too early. So I really, really enjoy that, that they are, that they're going often and frequently. And again, that they are, that the trains are reliable. And then it's almost, almost if you need to sit and you want to sit, you can almost always find a place to sit. They are rarely overly crowded. I might have forgotten how it was a year ago, but I also, since they're also going so frequently, also means that the, like, the space is always quite ok. And I have in the ten years I've lived in Copenhagen experienced less than ten times that you couldn't get on the train because it was too full and then it was because something else was wrong.

**00:09:03**  
Josefin Well, looking at more things like that, if you could change anything with the Metro, what would that be?

**00:09:10**  
JR Um, I'm fairly tall, or at least my legs are long, so I really do not like the seating arrangement where you sit opposite other people as they are just close enough for me to always rub my knees towards.. Against somebody. And I've really enjoyed the way they have done it in some of the newer trains with seatings parallel and each side of the car. It also makes more room for standing and.. Also it might be me, that's just too much of a focus on the rules, but the question was, what was the question?

**00:10:01**  
Josefin So it could change anything. What would it be? And it could be anything. It's your experience.

**00:10:06**  
JR Yeah. Yeah. Then stricter, stricter enforcing of people not bringing their bikes in the rush hour. They are big, dirty and take up too much space and yeah. Uhm, else. Yeah, maybe more things to grab the ceiling. Sometimes you can end up somewhere where you can grab anything either and that's just my balance that is a bit off, but it can be nice to grab onto something. Uh, and most of the things.. Some of the things are sort of centered around where people are sitting already. So it can be quite crammed right there. And then there will be plenty of space where there could be something you could grab onto in the ceiling.

**00:10:52**  
Jakub So just to look back at the experiences with bikes that you just mentioned, is that something that happens to you or that you notice frequently?

**00:11:07**  
JR That people bring bikes in the rush hour?

**00:11:09**  
Jakub Mm hmm.

**00:11:10**  
JR Um, I mean, I was like when I was taking the Metro regularly I would see it at least every week that somebody tried to squeeze in the bike in a semi-full train and. Yeah.

**00:11:30**  
Jakub All right, so thinking about your experiences in their totality, do you think the Metro operates well?

**00:11:42**  
JR Yes. Yeah, I do. And, yeah, and I think they're good in updating their Twitter, for example, with information, so you can always find out what it is and or the outlook for stuff. So working at Østerbro, if you should go and take the s-train or the coastal trains, then get home faster or if it's worth

waiting just five minutes because it's just light going out, going wrong somewhere. And so, yeah, and overall, I think they work quite well. All right well.

- 00:12:24**  
Josefin Have you ever gotten stranded on a train?
- 00:12:26**  
JR Stranded?
- 00:12:28**  
Josefin Like suddenly it didn't operate and you got stuck there?
- 00:12:33**  
JR Yeah, I must.. I think.. No, I think I always end up on the stations and looked at the train that was stranded in the opposite. I think once maybe, no, no, I know nothing that comes clearly to mind.
- 00:12:50**  
Josefin Right.
- 00:12:53**  
JR The picture is frozen on my side, just for your information..Oh it's back now.
- 00:12:59**  
Jakub OK, so how would you normally get your metro ticket?
- 00:13:10**  
JR I use Rejsekort.
- 00:13:13**  
Jakub And have you ever used any other way of buying a ticket instead of Rejsekort?
- 00:13:22**  
JR I mean, I used to buy Klippekort back when that was a thing many years ago and, um, yeah, I've also bought it at the station. If I didn't bring my Rejsekort, which was always a hassle because not all of them took cards, at least in the beginning. So you have to have the cash. And I've also bought via the mobile phone, which I of course, Jakub, responsible for the company subscription, ended now when I'm on the company paid one. But then so primarily Rejsekort in the past, I've used all of the different buying a ticket on the station and buying, uh, and buying mobile, buying it via mobile or having Klippekort. Or having Periodkort, the monthly ticket as well.
- 00:14:12**  
Josefin Have you ever experienced issues when you've bought a ticket or topped up the Rejsekort or something like that?
- 00:14:19**  
JR Um, no. Rejsekort I always topped up. I think I am very timely. I once lost a ticket. I once bought a ticket and then lost it. And that's I mean, 100% my own fault and of course, I couldn't argue my way out of that. And again, I'm the one to blame, really. Uh, and then I mean, I have stood by some of those old, uh, those old machines where the touchscreen has.. Is outdated and not working. And maybe I've missed one train. But again, since it's the Metro, it's okay.

- 00:15:03**  
Jakub All right, so let's imagine that you are taking the Metro. Have you ever interacted with any of the Metro personnel?
- 00:15:18**  
JR Uh, I mean nothing more than when they have asked for my ticket. I know I can, often the information I've needed I couldn't read on Twitter or read on the screens. And I know my way around the Metro. I mean, it's, uh. Yeah, no, I have only for ticket checks.
- 00:15:45**  
Josefin What would you say that experience has been like when they check your ticket?
- 00:15:48**  
JR Uh, I have no problem with it. I think they are fast and does it well. The one time I got a ticket, they didn't, he didn't give me a lecture, which I mean, I've gotten in other.. In the s-train for example. And if they.. If I.. When I got a ticket there, so in overall, I think they're they seem professional and they're doing their job. And so. Yeah, I know I have nothing to put on them.
- 00:16:27**  
Josefin I'm going back to what you said about like you can find information on Twitter. So how would you say their communication about what's happening is? Like if there's something going on, how do you feel they communicate it?
- 00:16:42**  
JR Uhm, I mean, I feel like they're communicating it.. I feel like they're communicating it to someone straight and to the point, I mean, Twitter is what Twitter is, so it's for shorter.. Shorter and concise messages. And I think they do it in a way that I get what I need to know, like there's expected.. 'There's expected a longer travel time, the train is stuck somewhere, expect something new in five to ten minutes'. And I don't expect much more because if I'm going home from work, I frankly don't care if it's because it's a signal or it's køreledning or whatever is stuck. I really don't care, just focus on getting home. So I think they're.. They're doing it with the mind of a commuter that just want to go home and doesn't care too much about the technicality and it just wants to go home.
- 00:17:49**  
Jakub All right. Do you ever interact with other riders when you are on the metro or at the station?
- 00:17:58**  
JR I really try to avoid it. No, no, I rarely, I rarely do. And I'm often listening to a podcast or something similar so I'm sort of just, you know, sort of keeping to myself and I mean, barely saying anything to anybody, but I mean, people are also good in sensing when they're standing in front of the door or something that they need to move, uh, yeah.
- 00:18:28**  
Josefin How do you feel if anyone interacts with you then?
- 00:18:32**  
JR Uhm, I think it often depends on how close we are to Christianhavn station because I think in this.. And depends on the intent as well. If they're just asking me what the time is or where the next station is, it's fine or how to.. How the fastest way to get to the airport.. And if there is.. Or how, where they need to change to get to and to Østerbro, Østerport or whatever it that's I mean, that's fine. If, if the few times people have wanted to take a longer chat, I don't, I haven't really felt like it and I've tried to shut it down



or got up and gotten off the train. Uh. Yeah, that's I mean, overall, of course. Yeah, if people.. If people are asking for help then I don't mind, if they are looking to chit chat, I'm more on the fence with them.

**00:19:43**  
Jakub

So you mentioned Christianshavn, what sort of experience do you have with that station?

**00:19:51**  
JR

I think it's clear that Christiania draws a lot of.. A big crowd and so I can feel this especially on Friday afternoons, that Christiania crowd is also gathering in the metro going there. So, I mean, often there'll be larger groups of people and they will.. They'll be smelling a bit like weed and also.. Yeah some groups of the maybe lesser fortunate, but they'll just a few more.. I rarely see beggars anymore, but I think if there will be a beggar on the train, they will they will get off of Christianshavn. Or get on at Christianshavn because that's where they have their errands.

**00:20:38**  
Josefin

Elaborating on that a little bit, would you say you generally feel safe on the Metro?

**00:20:44**  
JR

Yes, in overall, yes. There's always people around and I don't think I've ever had a.. I think I've had one situation where there was.. There was a man who obviously had other issues. But I think he was also drunk, screaming and breaking bottles. But he actually seemed to be mostly annoyed, angry at himself. I don't know. He didn't like lash out at other people on the train but.. And he left quite quickly.. But yeah I would say, overall, it's good. And there are always other people and the stations most often has more places, more places to exit. You don't feel like you are stuck anywhere when you're at a station.

**00:21:45**  
Jakub

So are there any particularities of why the Metro makes you actually feel safe besides the people being present?

**00:21:56**  
JR

I think it's because you're in one big tube and in the s-train you very easily can be isolated, for example. And that could be.. It can be far between people. You can feel quite alone in the s-train and you would rarely feel alone in the metro, although people might be at the other end. But you will always know approximately how many people there will be in the metro. But on s-train, you never know.

**00:22:23**  
Jakub

OK, that makes perfect sense. So now thinking a little bit about the design of the Metro, how would you evaluate the overall design?

**00:22:41**  
JR

Uh, the design of the train interior or the..?

**00:22:49**  
Jakub

For example, we can start with that, yes.

**00:22:57**  
JR

I think it's nice and flexible in the sense that some of the seats are just to fold down and you can.. So if there's need for extra space for a pram or a bike, you can have it there. Or if you have something tall, you can transport it there. And then overall, I feel like, again, plenty of space to stand on, but maybe lacking a little bit of like things to grab onto and else I mean. I've brought a lot of, not a lot, but I do have some international friends and

taking them to Copenhagen, they always.. Many of them are very fascinating about the driverless train, seemingly very futuristic. And I sort of get the same also when you.. I mean, out here, the Metro is above ground, actually also and even on.. On higher.. Higher than the street level. So they do seem some sort of futuristic when this driverless train is just coming through the.. Coming through to city actually. And reminds me a little bit of like areas of Tokyo.

**00:24:22**  
Josefin

So then also, if we if I look at trains, if we look at then the stations themselves, their design, how would you describe them?

**00:24:32**  
JR

Um, I really like how they manage to get to the area that they're in, represented on the on the new.. On the city ring.. Yeah the city. Is that's the English word for it? And I find it cool that they.. That they also make sure to include where it crosses with the s-train with the red tiles they have. I think the above ground stations are pretty dull, but also hard to make sexy, I suppose. Uh, but does like.. Does their, they do the job well and I mean it's.. None of them are confusing because they only serve one.. Most of them only serve one line and the few that does serve more than one line, you don't get lost on the way there. And some of the.. Some of the older ones can feel quite cramped, Kongens Nytorv or Nørreport in rush hour are very cramped, but the newer ones, it seems very spacious and you will never get the feeling of being cramped in Kongens Nytorv for example.

**00:26:02**  
Josefin

I was just thinking when you said that in the city ring, you can identify or you can see that they've incorporated the area within the stations. In what way do you notice that?

**00:26:13**  
JR

Uh. So I first of all, just read a lot about the city ring it's been.. They started the building I think two weeks after I moved to Copenhagen. So it's also been a pretty constant thing of.. And I've been moving around Copenhagen as you do as a student. And later as an office worker. So it's just been interesting to follow in on. And then you can see that they have made a bit more effort than just concrete.. Concrete holes in the ground, as some of the other metro, sometimes are.. Metro station sometimes are. They a little bit more planned the colors and a little bit more.. I mean, they also.. The very steep escalator from Gammel Strand and also points directly up onto the statue. So you're sort of can see the statue will start appearing. And, you know, when you're on the escalator, it's clear that that's not a coincidence, that they have timed.. Timed that. So I feel like they've been very good in designing the city ring into the existing city and making sure that they combined both the historical and the new together. And I think that's what Copenhagen in overall is the old and the new together.

**00:27:43**  
Jakub

And so you already mentioned that you find it easy to navigate the stations. How would you overall describe the way you are being navigated through signs?

**00:27:58**  
JR

I don't think I've ever thought about that, I think, but so it might.. It must be.. It must be as good as this, I mean, as good as it can get. I know my mom has her troubles with it, but it's also what a 60 year old woman from Aalborg might experience when she walks into the Metro, but I mean, I

feel like I feel it's always clear where to go and it's always like changing from.. From.. From the, the old lines to the city ring has always just made sense. And on the places where the metro crosses the s-train, it's always also clear that you will not end up walking up stairs to get.. To find out that you walked onto a s-train track instead of the metro. And sometimes I have to I mean, I sometimes have been ending up at the wrong track in Nørreport for example, for the for the s-trains or for the regional trains or in Hovedbanegården as well, because they just look alike. But I feel here is quite.. It's quite clear that you're at a metro track where you can.. Where you can go from there and I also feel the fact that they're open and both ends also, for example, at Nørreport it means that you can either come up on, come up on the square itself, or you can go towards Torvehallerne so you're.. When you learn to navigate around, they have made an effort so that you can enter whatever side of the city you need to to go through.

- 00:29:45**  
Josefin  
And so in the way that you take the Metro, you have to switch from one line to another, right?
- 00:29:52**  
JR  
Yes.
- 00:29:53**  
Josefin  
Have you ever experienced, like, any differences between the metro lines?
- 00:29:59**  
JR  
I mean, the trains on the city ring seems newer. Uh, and again, some of the.. Some of the.. Some of the stations just seems more spacious and more.. Not less compact. And I mean, it also took a while to figure out and the one by the Marble church, the fact that it's in two layers and which was not something I was used to necessarily, but it's stuff like that. And overall, I feel like the service is the same and it's not like you feel like you're going over to something old and worn out when you change to the.. To the first metro. The other one just seems slightly newer, but the old one doesn't seem outdated.
- 00:30:56**  
Jakub  
OK, so have you ever discussed the Metro with others, like friends, family? You said that you followed the.. You follow them on Twitter right?
- 00:31:15**  
JR  
Yeah.
- 00:31:15**  
Jakub  
So have you ever discussed things that they post or in general?
- 00:31:20**  
JR  
No, never.
- 00:31:22**  
Jakub  
No. OK, yeah.
- 00:31:31**  
Josefin  
And yeah, just to wrap it up, we have some, some few questions just about the demographics of it all. So we know, so we know, who's who. So you, you mentioned briefly before but just to repeat, where do you live?
- 00:31:46**  
I live in Ørestad, 2300 S, so yeah, Amager.

JR

**00:31:58**  
Jakub

And what is your occupation?

**00:32:00**  
JR

My occupation is marketing manager. Digital Marketing manager in a medium sized IT firm. I don't know..

**00:32:12**  
Josefin

OK.

**00:32:14**  
Jakub

Brilliant. Well thank you very much for doing this interview with us. It's highly appreciated, it was nice and informative.

**00:32:22**  
Josefin

Very insightful. Thank you so much.

**00:32:24**  
JR

Of course. Of course.

## Appendix 2.6 - ND Transcript

- 00:00:10**  
Jakub All right, well, then let's just get started with the interview. So thank you very much again for taking your time to do it, even though you are home. The very first thing that we want to ask you is whether you are OK with us actually recording this interview so that we can use it later on.
- 00:00:30**  
ND Yeah.
- 00:00:30**  
Jakub Awesome. So just to give you an idea of what we are doing with Josefin, we are writing our research paper about the metro in Copenhagen and what we are actually interested in hearing and talking about with you are your experiences with the metro in Copenhagen. So this is what is going to revolve around and we've got a bunch of questions prepared for you, but it's an open discussion, so it may go either way. And should there be a question that you don't understand or don't want to answer it you can just say so, and we will do that. And if you have any questions now, then feel free to ask them. Otherwise, we'll get started.
- 00:01:10**  
ND Let's go.
- 00:01:11**  
Josefin All right. Perfect. So we need to go anywhere in Copenhagen. What's your main way of transporting yourself there?
- 00:01:20**  
ND That depends on distance. So if it's usually if it's like under.. If it's under I'd say 8 to 10 kilometers, I'd prefer bike and if not, I either go by s-tog or Metro.
- 00:01:45**  
Jakub Do you have any sort of reason why you would take the s-train or the Metro as compared to other means of transportation?
- 00:01:58**  
ND Honestly, no, I think the main reason is just convenience, whether where you want to go. So if I want to go somewhere and there's an s-tog station nearby, then I will take a s-tog, if there is a metro station, I will take the metro. And usually I prefer those over bus because the bus is very slow and stops like every few minutes, so then Metro is just faster.
- 00:02:24**  
Josefin Would you say you always get where you need to go with using the Metro?
- 00:02:34**  
ND Within Copenhagen, yes, but it's not always the fastest option. And that's usually why I prefer to take the bike. Because I'm.. I'm like in M2.. No, what is it, M3, the one that.. The red one that goes around the circle. You know, if you want to go to M1 line or M2 line, you have to have at least.. You go to Kongens Nytorv or Christianshavn and then it's just easier for me to cycle there and..Yeah.
- 00:03:11**  
Jakub So are you saying that you would.. If you wanted to take the Metro, you would rather bike to a station and then leave your bike there instead of having to switch?

- 00:03:24**  
ND  
No, not necessarily. But it's more than.. If my destination requires me to switch and it's within biking distance, then I'd rather not take the Metro at all and just bike there.
- 00:03:37**  
Josefin  
OK, are there any situations when you wouldn't take the Metro, you know, except for when you can bike?
- 00:03:48**  
ND  
Uh.. No, not.. Not something comes.. The only thing I can think of is when, uh, I don't know, when there's like maintenance and there's like a togbus, then I would generally try to avoid that.
- 00:04:10**  
Jakub  
And so, generally speaking, what is your opinion of the Metro?
- 00:04:17**  
ND  
So I said this to Josefin before, but I'm quite biased because the metro in Holland is the shittiest thing ever. And so I find the metro in Copenhagen quite good. I like that it goes every few minutes or so. Also minor detail, but it's pretty cool that there's no driver. Yeah. And I think it's just very convenient. It's quick. As I said, for me, the most important thing is it goes every few minutes. So I never have to really worry and check Rejseplanen because I know that if I miss an s-tog, there will be another one - Metro, there will be another one in five minutes anyway. So why bother checking? So that's a big plus.
- 00:05:06**  
Jakub  
How does it make you feel, actually, that the metro is autonomous and doesn't have a driver?
- 00:05:12**  
ND  
Um, yeah, I'm very neutral about it. My experience with it being autonomous is just that. It's.. It has never worked less than good or perfect. So I don't really worry about that, especially because it's underground and I.. Or the biggest part is underground and I don't see any danger in that. Yeah, I don't know.. I mean, you could say that if it's above ground, I don't know what will happen if there's a person on the track, but that has never crossed my mind personally.
- 00:05:54**  
Josefin  
You were mentioning a little bit there about Rejseplanen. Do you ever use that up?
- 00:05:59**  
ND  
Yeah. (Inaudible) I use it, especially when I travel to a destination that I haven't been to, just to check times and everything, but Rejseplanen doesn't always give the most ideal route, is my experience. So I also sometimes use the one from DSB, I think it's called. Because sometimes Rejseplanen has like really, really awkward connections. And I also found what's really weird is that between my group of friends, if one person looks up a route and the other one does the exact same, it sometimes gives different options, which is ridiculous. It hasn't happened to me personally, but I don't know. I think Rejseplanen definitely improve.
- 00:07:00**  
Jakub  
And so what are some of the things that you like about the Metro?
- 00:07:08**  
ND  
I think for me, a very big plus is, as I said before, that it just really.. It goes very often. I think the stations are placed on logical.. You know, they're.. They're really close to places where I would like to go. For example, if I go

to the city, it's really easy to go to Kongens Nytorv because then you're right in the city center. I think the cleanliness is great compared to other metro stations, metros, I've been in the world, Europe. There, it's quite clean, which to me, if I speak quite shallowly, if a metro is very, very dirty, I'm also less likely to go. And so for me, that's also an important factor. Yeah. And especially now with Rejsekort, it's just really easy to go, you don't have to buy a ticket. You just check in and go and check out at your destination.

**00:08:13**  
Josefin

If you could change anything with the Metro, then what would that be?

**00:08:18**  
ND

Well, I would say not specifically with the Metro, but with public transport in Copenhagen in general. I think the prices are quite steep, especially because I think or is as far as my knowledge goes, as a country and as a city of Copenhagen, I would like to make public transport as attractive to people as possible so that they avoid using cars. And I have to say, Copenhagen is quite a biking city. So that's, of course, also great. But for me, one incentive you could use is to really drastically lower the prices of public transport. For example, here in Holland, public transport is free for all students. And you see that no student will use the car because car costs money, gas costs money and public transport is free. And also, if I compare normal prices of Copenhagen public transport and thus the Metro to if I were to go with public transport here, then it's also quite expensive. So for me, the price is the first thing that I would change.

**00:09:33**  
Josefin

Do you ever check the prices before you go somewhere?

**00:09:40**  
ND

Not specifically, I you know, if you.. If you check your your travels on Rejseplanen, then you see, oh, it's like so many kroner for this trip, I don't necessarily go look for the price, but sometimes it just, you know, how you say flashes across the screen and they're like, oh, that's another 20 kroner, you know? But no, I don't specifically check it, because if I need to use the Metro, it's because I really need to use it, because otherwise I would have gone by bike or something. And so then price is not a priority at that time.

**00:10:25**  
Jakub

So what would you say a reasonable price would be for one ride, in your opinion?

**00:10:35**  
ND

That depends on where you want to go, of course. Yeah, I don't know. I prefer my.. If I can keep it under, like.. Uhm, yeah, what is a reasonable price? I know that here, if you want to travel by Metro or by bus, everything is usually under around 14 kroner. So that to me is a reasonable price. But of course, it depends on where you go, because if you want to travel one stop, then 14 kroner is excessive. But if you want to go, I don't know, from Nørrebro to Vestamager, then I think that is a very reasonable price.

**00:11:20**  
Josefin

Have you have you ever gotten stranded on a train?

**00:11:26**  
ND

In what sense?

**00:11:27**  
Josefin  
That it stopped working while you were on it or at the station.

**00:11:32**  
ND  
No, but I have gotten the issue.. And that was when I first.. It was like in the first few weeks that I moved to Denmark, which was ridiculous, in my opinion, is when the.. I was in Vestamager and the train, the metro didn't go. And then they have the tog buses or the metro buses. But you cannot buy a ticket there. And because I didn't have a Danish bank account yet, there is no way for someone who doesn't have a Danish bank account to get a ticket. So I basically relied on the friendliness of a bus driver to give me a ticket for free to the city. And from there I could buy a ticket because in Vestamager, and I know that most metro stations, if they're.. If the metro is closed, you can still go to the station and buy a ticket. But on stations like Vestamager or Ørestad, you cannot buy a ticket. If the metro station is closed, you cannot physically get to a ticket vending machine. So if that counts as stranded, then, yes.

**00:12:49**  
Jakub  
Have you ever used the DOT app to buy a ticket?

**00:12:54**  
ND  
No, no, but I do know that also that is not.. If you don't have a Danish bank account that is not usable. And right now it doesn't matter because I have a Danish bank account. But I think that is something really worth mentioning so that everyone who basically comes here as a tourist makes it a little more difficult to get a ticket.

**00:13:21**  
Jakub  
And so, so you said that you normally use the Rejsekort to pay for your ticket. How how is that experience? How has it been?

**00:13:31**  
ND  
Uhm, great. Yeah, I mean, we have a similar system here in Holland, so for me it was not much of a change. I mean, I like that you just don't have to worry about buying a ticket every single time and just, you know, you check in when you need to get in and you check out when you need to get out. And also, a big plus for me is that you don't have to check in and check out again when you change trains or metros. Yeah, and it's quite easy to find somewhere.. I personally have the anonymous one, so not the one with your name on it. I mean, it's easy to put money on it. Yeah. The only thing that might be, oh, is my Internet still working for you guys? Yeah, OK, because you froze for a moment. The only thing that I find a little bit controversial is not the right word, but that you have to have 70 kroner on the cards to travel. Which I do get, because if you take the train then you need, then, of course, the train company needs to be sure that you are able to buy for that ticket. But sometimes 70 kroner is just so inconvenient. I don't know. It's like one of those, that's what I mean with controversial. It's it's an issue, but I'm not sure if there's a solution for it.

**00:15:04**  
Jakub  
A pro-tip (inaudible) to that, but you would need a Rejsekort with your name. Then the limit is 25 kroner.

**00:15:18**  
ND  
Ah, 25?

**00:15:20**  
Jakub  
Mhm, because then they can..



**00:15:21** ND But do you have the option to?

**00:15:22** Jakub (Inaudible)

**00:15:24** ND Yeah, true, true. I just need to get one. I'm just too lazy to order it, and now I have the anonymous one. So why would I bother buying a personal one? But do you also have the option to, like, get new money on it automatically?

**00:15:39** Jakub Mhm.

**00:15:41** ND OK, maybe I should get personal.

**00:15:44** Josefin How come you didn't get a personal one to start with? What was the thing that limited you?

**00:15:50** ND Ehm. At the time that I got my Rejsekort, it was more because I needed it then and there and it takes a bit of time before you get your person one. I think, at the time, the website is also quite overwhelming with all the different.. Because if you want to get a Rejsekort, then all of the sudden they try and through.. Like through you off, by telling you about all their subscriptions and the things you can get. And then I was like, OK, I'll just get one from 7-Eleven and go.

**00:16:33** Jakub So you've got to go at 7-Eleven?

**00:16:35** ND Yeah.

**00:16:37** Josefin How would you generally describe the Metro's communication, just both on their online and whenever anything at the stations?

**00:16:53** ND Yeah, I think at the stations, it's great because you just see the signs and what I really appreciate is that especially.. Because I think that the advantage here is that it's autonomous. So when it says it comes in two minutes, it's there in one and a half and a half minutes to go in. And then it closes and then it goes, which is perfect because I'm used to public transport being late. So, yeah, that's great. But what I wish is that they communicate better is when there's maintenance. It's not always as well communicated, sometimes it says so on the signs, but then it's not entirely accurate or yeah, oftentimes maybe it would be nice if even Rejseplanen has like an overview. I don't know if they have that, of like maintenance coming up in the next few weeks, but yeah, I don't.. I have to say, I also don't specifically look for it. So that's also maybe my bad.

**00:17:59** Jakub So how do you normally find out if there were any maintenance ongoing?

**00:18:05** ND So either it's like on the bottom line of the sign that usually says how many minutes till the next metro or there's like a.. Like a like a pop up sign,

physical sign outside or somewhere. And it's like 'the metros don't go'. And you have to take the metro bus on the spot.

**00:18:33**  
Josefin Have you ever interacted with any personnel of the Metro?

**00:18:38**  
ND Uhm, no, apart from being checked with a ticket and 'hello and goodbye and thank you', and that's about the most interactions I get.

**00:18:53**  
Josefin And how is that experience been when they've checked your ticket?

**00:18:57**  
ND Fine. I mean, you just show them and then they're gone, basically, there's no time in between. I personally like it when.. I told you about this, Josefin, when we traveled the other day. I personally like it when I get checked because then I feel like I actually paid for something, because if I don't get checked, I'm always secretly in the back of my mind and like 'I could have just not paid and gotten away with it' which I would never do anyway. But yeah. Yeah, and sometimes you meet a cleaner that cleans the metro.

**00:19:35**  
Jakub So would you say that the metro in general operates well?

**00:19:38**  
ND Yeah.

**00:19:47**  
ND Would you.. Or have you ever interacted with any other riders on the metro?

**00:19:58**  
ND Kind of in the sense that sometimes you find a person that just talks to you out of nowhere, but I'm personally not the person who would strike up a conversation with someone in the Metro. I mean, the situation that I'm talking about was this this, I assume, a homeless person because he was going through trash and then he tried to give me like a bag and tried to give me like like a holder for a pen or something. And I was I was like 'oh, thank you, thank you'. But no, that's the only interaction.

**00:20:38**  
Josefin So how did you feel during that interaction? What did.. What did the fact that he approached you, made you feel?

**00:20:46**  
ND The fact that he approached me itself didn't make me feel anything but the fact that he tried to.. Give me things that most likely came from the street.. I just felt a little bit uncomfortable because I wanted to, you know, on the one hand you want to be polite and say no, but you also don't want to insult the guy because apparently he's taken a liking in you and he is like 'here you have my wonderful plastic bag'. But no, I was mostly uncomfortable.

**00:21:17**  
Josefin Would you say you generally feel safe on the Metro, though?

**00:21:22**  
ND Yeah, on the Metro itself. Yeah.

**00:21:25**  
Josefin                                    Yeah, OK, um, what do you think it is that makes you feel safe there?

**00:21:35**  
ND    Difficult question. I think it's just that the people that are on the metro generally just mind their own business. I don't know. I don't.. I don't think for me what would make a metro unsafe is not specifically a Metro itself, but it is the people in it. And so if you don't meet people, that might make you feel unsafe and.. But for example, my neighborhood, the metro itself is fine, but for example, if I go up the metro in the neighborhoods, I live near Nørrebro station and it's not the best neighborhood, I would say. And sometimes it can make you feel quite uncomfortable. But that's not the Metro's fault. It's the people in it.

**00:22:29**  
Jakub                                        So speaking about the design, I know you've mentioned it before already, but what do you think? How do you feel about the trains or the station design?

**00:22:45**  
ND    Yeah, I mean, I think.. It's not something I think of every day, but, um, yeah, I think it just works well for me. It's quite accessible. Not always so, because the elevators don't always work the way they should, and they're also not always as clean as they should be. Um, but yeah, it works fine. There's loads of escalators you can use. I'd like that they're.. The metros are always really easily recognizable with the.. With the sign outside. Yeah.

**00:23:25**  
Josefin                                        Would you say they're generally easy to navigate?

**00:23:31**  
ND    Yeah, I mean, if you pay attention to signs and everything, yeah, for sure.

**00:23:36**  
Josefin                                        So the signage helps you in..

**00:23:38**  
ND    (Inaudible) but that's mostly with metro stations that have all of the metro lines. So if I go to Nørrebro, there's basically you either go down to the Metro or you go up out of the Metro. So that's.. You don't really need any directions there. But for example, if you were to go to Kongens Nytorv and you want to change from M3, M4 to either M1 or M2, then it's nice that they say 'there's the exit and there still are the other lines coming.

**00:24:13**  
Jakub                                        Do you have different experiences with the different metro lines?

**00:24:20**  
ND    No, no. They all work well, in my opinion.

**00:24:28**  
Josefin                                        And so, yeah, I'm still thinking a little bit about it, would you.. Would you say that the physical design of the metro stations or the trains, would you say they influenced your behavior?

**00:24:44**  
ND    My behavior, in what sense?

- 00:24:45**  
Josefin Just, you know, how you act, how you get around, how you feel.
- 00:24:55**  
ND I mean, um. Yeah. I wouldn't say it influences my behavior - it might affect how I'm how I feel about the Metro, because, for example, I like that it's it's quite modern, it's quite a contemporary modern outlook. And as I said, that also, you know, if you have a if you have a metro station that looks like it's been through something, then I'm also less likely to feel comfortable or. If that makes sense.
- 00:25:33**  
Josefin Yeah, for sure.
- 00:25:36**  
ND Yeah, but I wouldn't say it changes my behavior, I mean, it might change with how comfortable I am and also said it might be a little bit shallow to say, but if something is really dirty and then I automatically feel less comfortable, and then I'm also less likely to take the metro. Yeah. It's a little bit dramatic, a bit more nuanced in reality, but yeah.
- 00:26:05**  
Josefin Have you ever discussed your experiences with the Metro, with other people?
- 00:26:18**  
ND Maybe not with the metro itself, but usually, for example, when there's maintenance, sometimes say, oh, there's maintenance, again, I have to take this, this and this. But for the rest.. Yeah, I mean, as I said, when I talk with my friends about the Metro, then it's usually when I'm very surprised about how well it operates compared to what I'm used to. Because you have to imagine if you go to Holland and the Metro says it's going to be there in five minutes, it's going to be there in six or there's always a delay or, you know, it's stuff like that. And compared to that, I might be a little bit biased, but especially compared to the Copenhagen Metro in the Denmark metro is wonderful.
- 00:27:04**  
Josefin So are you saying that you're actually more likely to share positive things rather than negative things?
- 00:27:13**  
ND Oh, no, I think equally, I think that really depends on the situation. I think.. I think personally, yeah, it really depends on the situation. Sometimes if you.. if you come across a really positive or something just really occurs to you, something really positive, but they can just as well be negative, then I will share it. But the Metro is not a subject that would come up naturally in a conversation. It would be 'oh..', as I said, 'oh, I just had a shitty experience because there was maintenance' or 'I had a great experience because it already came the next minute'. But it's not something that would get into a conversation organically.
- 00:28:06**  
Jakub That's that, so those are all the questions that we have prepared for you. Well, we actually do have two more questions on the demographical kind and style. So we just wanted to ask you, where is it that you live in Copenhagen?
- 00:28:21**  
ND I live in Nørrebro. So, Nordvest.

**00:28:25**  
Josefin All right, and what's your occupation?

**00:28:28**  
ND Student.

**00:28:32**  
Jakub Brilliant. Well, those are all the.. Well, actually, one more three, so how under normal circumstances, how often would you take the metro per week?

**00:28:43**  
ND Per week? Yeah, I think once a week on average.

**00:28:54**  
Jakub Roundtrip or?

**00:28:56**  
ND Yeah. Round trip, yeah.

**00:28:58**  
Jakub OK, so it's more sporadic the way you use it.

**00:29:02**  
ND Yeah. But these things are affected by one, if I have to go somewhere - weather.. Because I'm a lazy person and if it's snowing, then I will not take that bike. Yeah, and that's the two main factors that would change my.. How many times I take the metro a week.

**00:29:28**  
Josefin Have you actually have you taken the bike on the Metro sometime?

**00:29:32**  
ND Yeah.

**00:29:33**  
Josefin What was that like?

**00:29:39**  
ND If I compare to s-tog, it's less comfortable because in the s-tog you have like specific stand, which is amazing. Also in the s-tog it's free and then the Metro, you have to pay extra money. And there's no.. I wish they would have or at least I haven't come across them, but I wish they would maybe have like some sort of bike stand or some sort of.. I don't know, it can even be just a railing where you can put either luggage or a stroller or a bike. So, yeah, but I mean, accessibility for me is really important with a bike, and that's perfectly fine because you can just take the elevator and it brings you right where you need to go.

**00:30:31**  
Josefin Cool.

**00:30:31**  
Jakub So that was it. Those were all the questions that we actually had. So thank you very much again for your time and doing this interview with us. It was really nice. Thank you.

## Appendix 2.7 - NP Transcript

- 00:00:03**  
Jakub                      Ok, well, thank you very much for being willing to do this interview with us. I just wanted to ask, as the very first thing if you are all right with us recording this interview?
- 00:00:51**  
NP                              Yeah, that's perfect with me.
- 00:00:54**  
Jakub                      OK, thank you very much. And so just to give you a little bit of an idea what Josefin and I, what our research is about and what we are trying to achieve with these interviews, we are very much interested and we are writing about the metro in Copenhagen. So what we are essentially going to be asking you about are your experiences with the metro system here in the city. And that is pretty much the general idea. So in case you do not understand the question or it is unclear, always feel free to ask us and we can rephrase it for you or we can help you out. It is, of course, also OK, if you don't want to answer a question, should that be the case, you just need to say the word and that is totally fine with us. So do you have any questions right now or should we jump into it?
- 00:01:52**  
NP                              You can just start.
- 00:01:54**  
Jakub                      Then we are going to start.
- 00:01:58**  
Josefin                      Right. So to get started with, when you need to go anywhere in Copenhagen. What's your what's your main way of transporting yourself there?
- 00:02:09**  
NP                              Well, the short answer is it depends. If it's too far away, in my opinion, and I would definitely take some public transport. I often use the Metro because I live quite close to both the old one and the new one. So in that sense, it's it's pretty convenient. If the distance is shorter, within three kilometers, maybe I would definitely bike.
- 00:02:44**  
Josefin                      All right. Mm hmm. Why would you take the Metro compared to any other types of transportation like bus or train?
- 00:02:56**  
NP                              I think it's more reliable in terms of how often it's running, and it also runs often or more often than the buses. And I also think it's a nicer experience to take trains in general compared to buses. It's easier. And also the Metro has a lot of cross-cross stations. I know what you call them but where you can change your transportation. So it's pretty convenient in that sense as well.
- 00:03:27**  
Josefin                      Right. Would you say that the Metro always gets you where you need to go?
- 00:03:35**  
NP                              Well, that's a funny question. Oftentimes, yes, especially after the city ring was opened, that broadens the possibilities a lot. And so. Yeah.

- 00:03:54**  
Jakub I was just wondering when you said that you like trains in general. Does that mean that basically anything on rails is preferable to things on wheels?
- 00:04:06**  
NP Ehm, well yeah. I mean, OK, if I had to compare, say, S-trains and metros, I, I think I would choose the Metro actually. Well, because it's newer and also it runs more often than many of those trains do. Yeah, I just think the experience is nicer, actually. So to go down like on the stations, it's more.. It feels more safe and feels more easy to, like, handle the entire situation, I think, compared to S-train stations where sometimes you have to stand on the right side of the track, for example. That doesn't really happen in the Metro. So it is more convenient, more user friendly.
- 00:05:00**  
Jakub OK, and so when you take the Metro, do you frequently have to switch based on your everyday experiences?
- 00:05:10**  
NP Yeah, I would have to do that, but I live only one s-train stop from Flintholm so I often go to Flintholm with the Metro. So. So, yes. But that's only because I live where I live.
- 00:05:23**  
Jakub Would you consider that to be OK or inconvenient, that you have to switch like that?
- 00:05:30**  
NP And no, it's fine. Yeah, because worst case, I can just walk from a metro station without it being too much of a hassle.
- 00:05:42**  
Josefin Is it easy to switch the switch when you need to? Like, are they closely interlinked or is it like a...
- 00:05:50**  
NP Yeah, well, if I can use Flintholm as an example, I would say it's quite easy. And again, the problem with the S-train is that if you go down the wrong staircase, you end up in the wrong side of the tracks. So that can be a problem. It isn't for me now because now I know where to go. And but in the beginning, it can be a little confusing. So in that sense, it's not easy unless you are used to it. But otherwise, I think to change to another type of transport from metro stations, is generally a nice experience. I mean, there are signs everywhere and also in the new metro and the old metro, the combination I don't know if it's three stations. I think that intersects and I think it's neatly signed everywhere, and, yeah, I would say it's OK.
- 00:06:56**  
Jakub So looking at your usual public transportation habits, how often do you normally take the Metro?
- 00:07:08**  
NP Is this before or during covid?
- 00:07:12**  
Jakub Both, can be..
- 00:07:14**  
NP Both? Yeah. Well, I think my everyday schedule has changed a lot in the last few years because before I lived on Amager, so I took the Metro a lot and now I live very close to school, so I tend to bike more. What was the question, how often I use it? No, what was it?

**00:07:40**  
Jakub Correct, yeah.

**00:07:45**  
NP Well, maybe a few times a week now, before maybe a little more.

**00:07:53**  
Jakub So would you consider yourself a commuter or like a occasional user?

**00:07:59**  
NP Yeah, yeah, I would say so.

**00:08:02**  
Jakub The second one or the first one?

**00:08:05**  
NP Oh, I thought it was they were synonyms.

**00:08:08**  
Jakub Oh, OK.

**00:08:09**  
NP No commuter is like everyday, right?

**00:08:12**  
Jakub Sure, yeah.

**00:08:13**  
NP Yeah. And no then OK. Right now I would say occasional user.

**00:08:18**  
Jakub OK, yeah.

**00:08:20**  
NP But previously maybe more of a commuter.

**00:08:26**  
Josefin Are there any situations that you experienced when you wouldn't? Well, when you would decide to not take the Metro.

**00:08:34**  
NP Oh yeah, when there are Metro busses. I would say yeah.

**00:08:42**  
Josefin How come?

**00:08:43**  
NP It's because they're much slower and then again, it's kind of the same what I said before with like the reliability in a way, I think it feels more safe to take the metro. So when there's a bus replacement, it's like back to the 'oh no, now I have to take the bus' kind of feeling. And also because metro buses are not there all the time. So it's hard to get to know them. And I know that sometimes they, for example, skip stations and they don't run as often as the normal metro does so. I think it's just inconvenient.

**00:09:25**  
Josefin When you say safe, do you mean like safe as in you know, it's going to come or safe as in your own safety?



- 00:09:35**  
NP  
More the first one. And yeah, like safe as in reliable, yeah. And safety wise, like danger, safety, I haven't no, I haven't thought about that much.
- 00:09:51**  
Jakub  
Are you referring to any particular experience? Is this an actual experience you've made with the reliability of the Metro buses?
- 00:09:58**  
NP  
Uh, no, it's just an assumption. I think I've only taken it a few times, if any. Maybe once I think? But it just seems like a hassle to me. And I think it's also kind of a general opinion. Like if you go to take the Metro and you're not aware that there are Metro buses it's like, oh, fuck, now I have to go somewhere else and I don't know when it comes and it just disturbs the plans.
- 00:10:31**  
Jakub  
And so, generally speaking, what is your view of the of the Metro? What is your opinion of it?
- 00:10:38**  
NP  
I love the Metro. Both in terms of like the Metro, how it runs and I think it's convenient to where I live and all that stuff. But I also like the concept, like I have followed Metro and the city ring on social media for many years now, and I love reading about it. I don't know why. I just I'm quite fascinated by the logistic and.. I think it's quite fascinating to think about when you first agree, like with politicians and you get the final confirmation about, yes, we can build this metro. It takes, I don't know, 15 years, maybe something before it's actually open, and I think it's very interesting to think about all the factors involved and all the people who are going to build stuff, plan stuff, engineers, all that. Uh, so I am very pro-metro girl.
- 00:11:44**  
Josefin  
Well, continuing on your love for it, what are some things that you really, really like with it?
- 00:11:52**  
NP  
Um, I like the social media part, and I think they have the nice animations in the photos that they post. I think it's cool that the normal citizens are able to follow the work. For example, they named the two big machines that are making the M4 line.. no, M5? No, the M4 to Sydhavn. And I think that's that's quite cool that they do that. So the SoMe aspect is very good. But also, it is by far the most convenient, the most easy type of transport in Copenhagen. I think the stations are very neat and simple and it's just easy. And you know where it goes. There are so few lines that it's really easy to remember which direction to take and which goes where? Compared to S-trains, for example.
- 00:13:04**  
Jakub  
So thinking about the social media, as you described it yourself and the fact that you enjoy following them, what what sort of emotion does it evoke in you when you when you look at these posts? How does it make you feel when you see that they name the machines?
- 00:13:22**  
NP  
Well, I think it's I think it's really cute, but I also, especially with the city ring because I lived in Copenhagen, but by the time it was almost finished and when it finished.. Um, I think it's also somehow a feeling of connectivity and the feeling of something that all people in Copenhagen share. And I think it's cool to follow work that I actually personally benefit from a lot. It was funny to see the city ring and everything around that and actually use it every day.. Almost every day.

- 00:14:05**  
Jakub Would you would you say that your opinion of the Metro has evolved over time?
- 00:14:13**  
NP Um yeah, I think so. I mean, it definitely helped with the city ring because the old metro has been there forever since 2001 I think. So that was just. Yeah, I don't know how to express it, like if you're used to something you're not that impressed by it, of course. So I think it was it was really funny to get an inside view of the new work, which I think generally we're kind of like a synergy and enhanced my my impression of the old one as well, because they brought some of the stations together, the old ones, the old Metros, were also involved in the process.
- 00:15:01**  
Jakub Are there any other things that you enjoy about the Metro now that we talk about the social media, you also brought up the the design. Would could you elaborate on that a little bit more?
- 00:15:15**  
NP Yeah. So I think it's.. The design in itself is a little boring. The old one is especially. So first, I'm very happy that they made the new ones in a bit more color. And I think it's I think it's really cool that they made the red ones with the s-train stations are so it's easy to spot. But I would have liked a little more. Bedazzling or what I call it on some of the stations, especially compared to, for example, underground stations in Paris, they're very beautiful in many of these stations. But I like the design because it's even though it's boring, it's very easy to to follow, like, it's very user friendly that it's it's that simple. I also like the experience itself of sitting in front of the Metro and just watching it go on the trails is a very pleasant experience, really.
- 00:16:21**  
Jakub So no feeling of being scared by the fact that there is nobody controlling it?
- 00:16:28**  
NP No, actually, I wouldn't say that. I think it's more impressive than I think I'm scared.
- 00:16:38**  
Josefin You were kind of going in that direction of it, like, do you have different experiences with the different metro lines? Can you tell the difference between them?
- 00:16:51**  
NP Like, if I know where they go or what?
- 00:16:55**  
Josefin Like in your experience with them, do you feel different when you're on M1 or M2 compared to when you're on M3?
- 00:17:03**  
NP Yeah, well, um. I actually don't know the difference between M1 and M2. I can't remember which goes to what end of Amager, but the yellow one is where I lived in Amagerbro. So in that sense, I have, I think, more of a personal relationship with that one. So I may feel a bit more.. What is it called, oh I forgot the word completely. I feel more at home in the yellow one compared to the green one. And since the city ring is so new, it is it is a different story, really, and I like it, but I also think it is a little bit confusing that it doesn't have the same end station, so in that way it doesn't feel as easy. And yeah, because the other ones were just super easy, I think. Or they are super easy.

- 00:18:17**  
Josefin  
Well, thinking a little bit more then about the physical design of the different ones, how would you how would you evaluate the trains, for example? What's your feeling about them?
- 00:18:29**  
NP  
Um, I actually don't really have anything bad to say about the trains. Oh I have one thing, actually, and I think in general, it's fine. It's neat. The seats are.. I don't really have anything to say, but in the new Metro, the M3, they have made fewer seats and more standing spots, which I think is a good idea. That idea I like but the standing benches-ish on the window side, a very slippery. And I think that's actually kind of a problem because it makes it harder to, for example, sit next to a stranger because you like roll back and forth and that's really annoying. It's like this little.. I guess it's kind of a feeling of insecurity. But besides that, I think the designs are good, there are many doors, it's easy to get in and out and also I think it's very nice that they have the interactive screens in the new Metro so you can see which stop you're going to. But I think that I've actually noticed that the.. So in the old Metro, there's only the overview, which is not interactive, it's just a sticker, but I think there are more stickers in the old Metro compared to the new Metro. I have found myself kind of looking for it and seeing that, OK, in this seat, I actually don't have an overview of where I am. So it's just a small thing, but it is also a bit annoying.
- 00:20:19**  
Jakub  
Is it the stickers that indicate with a flashing light what the next station is on the metro? Is that what you mean?
- 00:20:29**  
NP  
Yeah, that and also just the stickers. I think the new metro has both.
- 00:20:33**  
Jakub  
Hmm, yeah
- 00:20:35**  
NP  
I think there are a little too few in the new Metro.
- 00:20:41**  
Jakub  
OK, and speaking about the train design, you say that the window bed seats are slippery. Have you ever experienced that, that you, as you described before, started sliding towards somebody and felt uncomfortable?
- 00:20:58**  
NP  
Um, I haven't done it, like slide into a stranger, but I have slid into someone I was with. So it was just me imagining that it was someone I don't know and how awkward that would be. And yeah, I guess I, I mean, there are four, I think next to each other and I would always take an empty one, but I think that's kind of normal, slippery or not. But it doesn't really make the incentive larger if you slip into a stranger.
- 00:21:33**  
Jakub  
Certainly not.
- 00:21:39**  
Josefin  
Well, evolving on that a little bit, if you could change anything with the Metro, what would that be?
- 00:21:46**  
NP  
Yeah, well, I have thought about that a long time ago, and I think they should make some some rubber dots or something else that could

- eliminate the problem. I think it's an easy solution to the problem. And I don't understand how they haven't done it before.
- 00:22:02**  
Josefin  
Is there anything else that you also think of that you're like ouch, frustrated about?
- 00:22:13**  
NP  
Nah, maybe more trash cans, but it's not really something I thought about that much. But I think they are a little small, the ones that are there.
- 00:22:26**  
Jakub  
Do you mean on the actual train or at the platform?
- 00:22:29**  
NP  
Yeah, on the actual train there are few trash cans.
- 00:22:40**  
Jakub  
And so would you say that in general, looking at the metro system as a whole, does it operate well in your experience?
- 00:22:49**  
NP  
Um, yes, I think it does. Sometimes the train is late or some interruptions appear, but but generally I've always, almost always good experiences with the Metro and I think it runs smoothly, and yeah.
- 00:23:11**  
Jakub  
So has there ever been an experience where you would have gotten stranded or stuck because of a delay?
- 00:23:20**  
NP  
Um yeah, I remember I think that was last summer, maybe. I was getting on the metro at Frederiksberg station, I don't remember which direction I was going, but it was the old one in. And I think it was there for like 15 minutes or something, but I wasn't in a hurry. So for me, it wasn't a problem like that. It was just a little annoying. I don't know, I mean, it is never funny when the trains or the buses are late. So I don't know what to say. It was just that, but again, I didn't experience that often, I would say.
- 00:24:04**  
Josefin  
Yeah, the one time it didn't happen. How did you experience the company handling it or the Metro?
- 00:24:11**  
NP  
They came with the updates on the speakers often. And so I think we were all well informed. I don't know how often. I don't remember, maybe every like two or three minutes or something. And also my train was stuck at a station, so I wasn't stuck in the middle of anywhere. So I think actually the doors were open the entire time. So if I wanted to, I could have just gotten out and. So in that sense, also because in this situation, I remember that I wasn't in a hurry, like it didn't matter when it actually began driving. So I think I was also.. I think I was in a good mood, I have I mean, of course it was annoying, but I don't remember it as a bad experience.
- 00:25:14**  
Jakub  
OK, and so if we think about how you get your tickets when riding the Metro, how do you normally get a ticket?
- 00:25:26**  
NP  
I use Rejsekort. Yeah, I have also had a Ungdomskort before. But now I use Rejsekort.
- 00:25:35**  
Jakub  
Do you have any experiences with buying a physical ticket or using an app to buy a ticket, or do you only use Rejsekort?

- 00:25:46**  
NP  
I have sometimes used an app if I forgot my Rejsekort, but the things where you can buy tickets, I never use them, no. But I think the app is.. I just use the called DOT that I think that goes for all public transport in Copenhagen. And I mean, it's quite easy to use. But it hasn't been many times.
- 00:26:20**  
Jakub  
I'm thinking that when you use Rejsekort, when you are taking the Metro. Have you ever had any experiences with it, any trouble that you experienced? Or has it always been a smooth experience?
- 00:26:36**  
NP  
I think it can be a little hard to go to the check outs sometimes if there's a lot of people going off at the same station also because of the electric stairs that you have to try to figure out which one is going up and which one is going down. And so I think there is a few seconds of confusion and for everyone going out of the station, because you have to see which way do I go and where do I check out? I have also experienced a few times that I thought that there were some check in stations like further down or further up on the levels so I've gotten too far and that I had to go back. But that was mostly at the new stations, I think.
- 00:27:29**  
Jakub  
So is it that you can see a difference in where you can use the check in and check out stands between the different lines?
- 00:27:38**  
NP  
Yeah, I think that they made they made many more stands in the plateau between the stairs, in the new stations. So they.. I got the feeling that they kind of want to spread people out when they check in and check out so that not everyone does it at the actual station. So, yeah, yeah, I don't remember exactly, but..
- 00:28:12**  
Jakub  
That's totally fine, no worries. In terms of the escalators, you said that that could be a little bit confusing, correct?
- 00:28:20**  
NP  
Yeah.
- 00:28:21**  
Jakub  
Do you experience that ongoingly?
- 00:28:25**  
NP  
Yes, I do, because at some stations.. There always two next to each other and in some stations they both go up in one way and they both go down in the other one. And then in some stations, it's like both of them. You know what I mean? Like, they go opposite directions, but they're next to each other. But I actually think that they can change it whenever they want to so that all the escalators can go both ways. So, yeah, so I think it depends. I haven't seen a pattern yet at least.
- 00:29:12**  
Josefin  
Have you ever interacted with any of the staff working around the Metro, any personnel?
- 00:29:21**  
NP  
Yeah, I remember that was on the day when the city opened. So I of course went on the Metro, because it was free all day and then and I was with some friends and then we talked to some guy standing in, I think it was on Paul Henningsen plads in Østerbro, anyways. And they were just these people standing there, like just information people. And you could ask

them whatever you want. And he was the one who told me that it took so many years. When you say first that the confirmation is there to build the Metro and that, I think he said 15 years to when it was actually done. And so that was quite cool. I think he was super nice. And he came with some funny fun facts and it was really. Yeah, that was really cool. And there's a lot of personal after corona, uh, but I haven't really talked to them.. No, not after corona, after the metro opened. Sorry, I don't know why I said that, yeah.

- 00:30:37**  
Jakub All good, no worries. So have you ever had your ticket checked?
- 00:30:43**  
NP On the Metro?
- 00:30:44**  
Josefin Mm hmm.
- 00:30:45**  
NP Yeah, yeah. Many times.
- 00:30:47**  
Jakub Did you have any sort of interaction with the stewards who came to check your ticket?
- 00:30:56**  
NP Not more than 'Can I see your ticket?' And I say 'Yes' and they scan it. That is usually just what goes on.
- 00:31:12**  
Josefin Do you ever interact with other writers, maybe people you don't know at the Metro or the station?
- 00:31:25**  
NP Not if I can avoid it, I think. Uhm no, not really.
- 00:31:32**  
Josefin Do people ever interact with you that you don't know?
- 00:31:37**  
NP I think maybe some tourists, sometimes. But generally, no, I would say, like sometimes tourists ask, like, what direction and stuff like that and that's fine. And sometimes also like homeless people or people who are drunk or so. Yeah, it's not really in a nice way, the tourists are fine. But sometimes I also have these unpleasant conversations where you just want to just smile and hope they go away.
- 00:32:12**  
Jakub Have had these experiences, say, with the drunken people or homeless people. Impacted you in any way, did it influence how safe you felt?
- 00:32:29**  
NP Uhm. Well, in the metro, no, but for example, at the Christianshavn station, there are kind of a lot of homeless people so that sometimes in the evening, mostly it is.. It's.. It is a bit uncomfortable to go up from the stations because there's yelling sometimes and there is just general. I forgot how the word is in English. I don't know how to say it.
- 00:33:02**  
Jakub Unrest?

**00:33:04**  
NP Yeah.

**00:33:07**  
Jakub Okay.

**00:33:12**  
Josefin Do you ever discuss your experiences regarding the Metro with others?

**00:33:19**  
NP Uhm yeah, I think sometimes if you sometimes if I have a funny experience, I see something funny in the Metro, I can go tell someone about it. Uhm, also, I remember when the Metro was late, as I told before. I was I think I was live-updating my boyfriend and that matter. Uhm, so yeah, I would say like just general, if you experience something not only in the Metro, but just the public in general, you see something and you tell it to your friends. And I think I do the same with the Metro. I think I could imagine myself doing it a bit more maybe than other people also because I follow them on social media and. So there's a bit more to it, so maybe.

**00:34:13**  
Josefin Mm hmm. Right.

**00:34:17**  
Jakub And were there any, like, specific matters that you, let's say, so on the social media and discussed with a friend or your boyfriend or whoever, whoever it may be?

**00:34:37**  
NP Yeah, I remember discussing the map when the new Metro came, it was like made public how the new stations would be, uh, so I remember talking to my friends about that. Um, also I remember a few encounters actually where we discussed, I think we were going from A to B taking the Metro and we discussed what is the next station is, how many stations are there, because it is a little hard to remember when they all new. It's easier to remember the old one. And so in that sense, yes. But also, I don't know. Oh, yeah. It's because we had this thing at my study called Tour de Kastrup, where you had to drink one beer per stop starting from Frederiksberg to the airport. That was quite funny. Uhm, and afterwards we talked about like how many stations were in between and which one was next because they were some talk about a record like being on the train from Frederiksberg, I think it was Femøren or something. Where the person managed to drink one beer per stop without stepping out. So that was quite impressive, actually. And so in that sense, yes. But it mostly is like the stations. I think.

**00:36:04**  
Jakub So in away, you have repurposed the Metro as a moving pub.

**00:36:10**  
NP Yeah, exactly. And I can recommend the experience if anyone's interested.

**00:36:18**  
Josefin Well, I wanted to ask, how do you like when people are drinking on the Metro? How do you how do you feel about that?

**00:36:25**  
NP I feel fine because I have done it myself. And I mean, it is normal if you're a few people and you're going somewhere and you have, I don't know,

maybe 10, 15 minutes with public transport, why not, like, get a beer on the way? Uhm, so I don't have any problem with it.

**00:36:46**  
Josefin

All right. Yes, I think that's most of it, isn't it?

**00:36:57**  
Jakub

That covers most of it. I just want to quickly circle back when you were describing the station layout and how the initial lines were a bit more boring, the new ones are more interactive. Would you say that the design and the layout of the station somehow influence your behavior when you are at the station?

**00:37:22**  
NP

Do you mean the design, like with the different colors, that design? Or what design exactly?

**00:37:28**  
Jakub

We could say, for example, the design of what the station looks like, but also how they are built.

**00:37:36**  
NP

So the actual layout of them, too.

**00:37:38**  
NP

OK. Uhm.. Behavior.. I never thought about that. No, I don't know, I noticed, I don't know if it really answers the question, but I noticed that some of the news stations are very far underground. Uhm. And I could imagine that say that I live near a station that is that is quite low and yeah, that lays low. I maybe would have hurried a bit more, if that makes sense, because I know I have to go further. But since I can't even remember what station it is, then no, I don't know. I don't think affects my behavior.

**00:38:31**  
Jakub

OK, well, I believe that if Josefin does not have anything, then that the main part of our questions and now we just want to ask you for a little bit of demographics so that we can put some numbers on you.

**00:38:51**  
NP

That's always nice, yeah.

**00:38:53**  
Jakub

The first question, actually, being, so where do you live in Copenhagen?

**00:38:57**  
NP

I live in Grøndals Parkvej, which is just next to Grøndal station.

**00:39:04**  
Jakub

What city part is that?

**00:39:06**  
NP

That's Vanløse, just on the border to Frederiksberg. So, yeah.

**00:39:13**  
Josefin

Mhm, and what's your occupation?

**00:39:16**  
NP

I study at CBS, I am writing my bachelor's thesis right now in business, language , and culture in German. It's written in English, but the program is in German.



**00:39:30**  
Jakub

All right, all right.

**00:39:34**  
Josefin

Yeah, I think so.

**00:39:36**  
Jakub

OK, well, thank you very much again for talking with us for some 40 minutes. It's really lovely.

## Appendix 2.8 - SN Transcript

- 00:00:17**  
Jakub  
Besides the two of us being very thankful that we are having this interview together today, we wanted to ask you if it's OK with you that we recorded this meeting?  
,
- 00:00:28**  
SN  
Yeah  
,
- 00:00:31**  
Jakub  
That's brilliant then. And so, yeah, just to give you a little bit of an idea.. Sorry. Oh, OK. Something did not work out there.. But just to give you an idea of what our research is about, Josefin and I are writing about the Metro in Copenhagen and so what we are essentially interested in are your experiences. So we have a bunch of questions ready and it's more like an open discussion. So, you know, you can really say whatever you want, you don't have to like hide anything. And in case you don't understand the question, then you should just feel free to say so. Or if you don't want to answer a question, you can also say that, it's totally fine.  
,
- 00:01:22**  
SN  
Sounds good.  
,
- 00:01:23**  
Jakub  
OK, so do you have any questions right now?  
,
- 00:01:26**  
SN  
No, no, that's fine.  
,
- 00:01:28**  
Josefin  
Perfect. All right. So to get started, when you need to go anywhere in Copenhagen, what's your main way of transporting yourself there?  
,
- 00:01:37**  
SN  
Hm, actually, I don't need to go somewhere that often in Copenhagen, right? Because all of my business is in Frederiksberg. So, yeah, if I get the.. I get the train from Malmö to somewhere in Denmark and then either. Yeah. In those very rare situations where I'm not going to work, then it's probably going to be the train. Um so the s-train. But I do use the Metro to, to get to work from I don't know Nørreport, uh, to Frederiksberg from the airport to Frederiksberg.  
,
- 00:02:25**  
Jakub  
OK, and so is there a particular reason why.. I mean obviously taking the metro, the train from Malmö is the only opportunity. You cannot go any other way. But in terms of when you get off the train, is there a specific reason why you take the Metro then from there to work?  
,
- 00:02:48**  
SN  
That's also because that's just the fastest connection that I have. I like I said, I prefer to switch at Nørreport because for me, the main criterion here is like.. Comfort, right like that, not having to get up and walk and then get on a different means of transportation and so on. So this the first criteria. And if I'm.. If I'm prioritizing comfort, then I will sit on the train in the same

spot for as long as I can. So that's Nørreport. And then I would switch to the Metro. And because there is no other better connection from Nørreport to Solbjerg Plads. If I'm prioritizing speed, though, then I might actually change at the airport. And yeah, it's a few minutes faster to take the metro from the airport to Frederiksberg. Let me see what else.. What other reasons could there be. It could be the train doesn't go any further because they do that a lot, sometimes there's disturbances in the traffic and then yeah, you have no other option than to take the metro from the airport. And then I also have a very vivid recollection of this period when you had to go through a border control, to enter Denmark. So you have to get off the train, be checked and then get back on the train. And there it was always, well, that's actually on the way to Sweden so that's the return trip, right. That was also uhm.. That was one of the factors I.. Do I take the metro to the airport, straight to the airport, or do I take the train? Get off the train.. Yeah, uh. So different factors at different times. That's the conclusion.

**00:05:10**  
Josefin

Are there any situations when you wouldn't take the Metro?

**00:05:17**  
SN

Well, if it wasn't running, for example, which does happen, or used to happen a lot. Uh, let me think about other situations. I mean, the metro being crowded.. That's a.. That's a thing that happens sometimes. Right. But that doesn't scare me because I come from a background of having grown up in Eastern European country. And I'm OK with pushing my way through in a very crowded metro or bus or whatever. I think there have been times where I have hesitated. Let's say, for example, a situation where I was.. Yeah, it was within Frederiksberg. Right. So I was trying to get from Solbjerg Plads to, let's say, Dalgas Have. So you have two options - walk or take the metro. And sometimes I chose to walk because it would have cost me more because of the different zones. Yeah, so price is also the thing that sometimes influences my decision.

**00:06:46**  
Jakub

Do I understand correctly that you said that when you took the Metro to work and had to go to Dalgas, that you would get off the station before to walk to rest so that you wouldn't have to pay another zone? Or did I misunderstand that?

**00:07:01**  
SN

There have been occasions like that. But it could also be the case that I was at my office in Solbjerg Plads and I needed to go to a meeting at Dalgas, and then I would really have a clear choice walk or Metro. And yeah, most often I would choose to walk to avoid paying. There's an extra thing with this Rejsekort, right? Because I don't use that a lot. I only like I have my own card, like subscription for the train and the Metro. So for my regular commute and for anything else, I have to use the Rejsekort. And I had very poor experiences with that, mainly because of myself, because I'm not used to using it. So I forget to freaking check in, I forget to check out. And that hasn't been.. It hasn't been nice.

**00:08:11**

So it does that.. Are you implying that that led to you getting a fine?

Jakub

00:08:18  
SN

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Yeah. Or at least being threatened with that a fine. I have managed to talk my way out of it a fine. But that has been so unpleasant that I would not like to be in a situation like that before. And yes, I have also forgotten to check out and there is a minor.. I don't know.. That you get.. You end up paying a little bit extra because of that when you finally managed to check yourself out through other means. Yeah. Online, basically.  
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00:08:56  
Josefin

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I'm curious how.. When they've checked your ticket like that, how has that experience been? You said it wasn't a very nice and you had to talk your way out of it.  
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00:09:05  
SN

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Oh, it's horrible. I.. I.. I dread the sight of those guys and it's not their fault entirely. It's, it's mostly got something to do with the way that the.. Yeah. The, the company that I buy my train subscription for train plus metro subscription from has chosen to deal with the zoning issue of yeah.. Skåne plus.. Yeah, Central Copenhagen, right. There's always been a little bit of a blurry line or misunderstandings between Skånetrafiken and in the metro.. The metro in Denmark about which zones or which areas in particular my type of subscription covers. And from my experience, uh, typically the ticket controllers on the.. On the like, on the.. In the train system are more aware of this whereas the metro ones are, I don't know, never up to date on this thing, so they tend to be very, very unpleasant about it. Being an English speaker obviously does not help at all. So that's.. That's an extra stress factor for me when I have to have an interaction with one of these guys. What was the question? I don't know..  
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00:10:39  
Josefin

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Exactly what you're talking about, just your experience when they check your ticket.  
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00:10:42  
SN

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Yeah no, I feel like it wasn't always like this. But then again, it's in the in the past years, ever since the new line open and they started charging extra just for taking the metro. And that has been added as a top up on, like as an extra option on my subscription. That's when it kind of starting to fall apart for me. So from being an OK experience, it like starting to be laced with all sorts of anxiety. You know, the actual trip 'oh, am I going to get checked? Is this guy going to know that I am actually legally covered?' Not legally, but you know, not freaking trying to deceive anyone. I have paid, in all honesty - a lot of money for taking this trip. And yeah. So that's kind of like my thought process when seeing a Metro ticket controller. Stewards, they're called.  
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00:11:56  
Jakub

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So you did mention that being an English speaker and meeting the stewards, the train staff, was uncomfortable for you. Could you elaborate on that?  
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- 00:12:12**  
SN  
Yeah, you can usually see that they're not comfortable speaking English themselves. They have a working knowledge of it, but not enough to like, to give you a sense that they understand and they.. They follow your arguments and what you're trying to convey to them about your situation. So now whenever the interaction requires more than yeah, 'show me the ticket, there it is, thank you'. Uh yeah, for me, it just becomes a little bit worrying. I feel like most of the ones I've dealt with personally are not that good at English and that makes them insecure and a little bit more. I don't know. It just changes how the conversation takes place. I've seen them being much nicer to other people who were speaking Danish.
- ,
- 00:13:10**  
Josefin  
How often would you say you interact with them? How often do they check your ticket?
- ,
- 00:13:18**  
SN  
Well, you see now, I haven't really taken the metro in a very long time, but it doesn't happen very often. It probably once every week, once every two weeks, something like that. Now, I did get a fine once. So, yes, Josefin has heard my story.. (Background noise) That's my coffee machine switching off. So, yeah, I did get a fine and it was precisely because of this misunderstanding. So the guy checked took my ticket insisted that I didn't have the correct zone even though I had been told the opposite, basically by the company I bought the ticket from. So it ended up with me having to spend a lot of time talking to both sides and getting them to agree on a conclusion. And the conclusion was also kind of like conflicting because one side, Skånetrafiken side said 'it's fine if it ever happens again, the fine will just be erased because you haven't done anything wrong', whereas Metro insisted that 'this is a one off, you're forgiven, now, if it happens again, then all hell and horror on you'
- ,
- 00:14:56**  
Josefin  
Did they ever come to a conclusion on that? Do you feel more comfortable with it now?
- ,
- 00:15:01**  
SN  
No, no. It it was left at that. And I actually ended up, like I started.. I just started buying the more expensive ticket, the more expensive subscription, because I, like it was.. I didn't like being afraid during my trip to and from work, so.
- ,
- 00:15:26**  
Jakub  
That makes a lot of sense. And so what is your general view of the Metro?
- ,
- 00:15:37**  
SN  
I mean, it's, um, I like it. If it hadn't been for these, um. Yeah. Like conflicts or misunderstandings, I don't know what to call them regarding the pricing, um, I think it's a very smooth way of traveling. I think it is relatively convenient. It's not as comfortable as the train, for example, because that's what I'm comparing to. You can be super hot in the summer and it's crowded. But yeah, I can say the same about the train. Um, so it's, it's, it's quite all right. But yeah, it's.. Yeah, it's the pricing thing, and I remember I

was also very disappointed when the new line was opened, for example, because it was.. It was my understanding that it would make the commute faster and easier, because yeah, you could jump off the train at Central Station and then just quickly run through a tunnel that connects to the, uh, the new metro line. But it wasn't like that. You had to go up, go out, cross the street, go down again. So, yeah. Again, something that.. Another instance of this where you get really excited about something and then actually it's not as good as you had hoped or as it was hyped up to be. And then the whole pricing issue - 'oh yeah, we have a new shiny line, but it's going to cost you more even though you're basically taking the same the exact same trip as you did before, now you have to pay extra for it.'

**00:17:35**  
Jakub

So you have to pay more for your ticket now, even though you are not using the new metro?

**00:17:42**  
SN

Yeah, exactly. So the Skånetrafiken 30 day subscription that I used to buy was with a set price. You could move freely using any means of transportation between, say, Malmö Central and zone two, including Frederiksberg. But then once the new metro line was opened, then you suddenly had to.. I don't remember exactly how much it was, but you had to pay extra just to use the Metro. And it didn't matter whether you were using the old line or the new line, just, you know, standard fee for metro use.

**00:18:31**  
Josefin

And what are so the opposite of that, what are some things that you really like about the Metro?

**00:18:38**  
SN

Uhm, I do like the idea that it's.. That it's fast and, you know. What else can be said about it that is good? I don't know. No, it's.. It's good. I would like to use the Metro more since I'm paying that much for it or once I'm paying as much right. It's relatively clean. I mean, you can't say that it's very comfortable, like, if you think about the seats or, you know, like things to grab on to when you're.. When it's stopping or starting. But I've seen worse. I've seen much worse. It's really, really OK overall, I think.

**00:19:39**  
Josefin

OK, well, elaborating a bit on what we already talked about, you said now with the with the seats and something to hold onto, if you could change anything with the Metro, what would that be?

**00:19:56**  
SN

No, I think I would put some air conditioning into it, and that's the first thing and yeah, maybe, yeah, just something about ventilation and air quality in it. And I would say, though, of course, more comfortable seating, but I know it would have a lot of wear and tear and yeah, it is used a lot, right. So they will probably not last long even if they've invested in better quality seats. I think they've already done a lot of improvements in some of the trains with the. Yeah, the portion of seating spots versus, yeah, standing spots. So they have optimized for the amount of people who can squeeze

onto the train. I don't know, I don't think that there is much to improve. Yeah, from that perspective, yeah. That's just my opinion of it.

**00:21:06**  
Jakub

And so when you take the Metro. Have you ever noticed how the company tries to communicate with you?

**00:21:16**  
SN

Oh, yeah, of course. Good thing you reminded me. Yeah. The famous mumbles you have to, yeah, you need a special translator also for the Danish. Yeah. No, that's not great. It's true. I don't.. It's definitely something to improve upon.

**00:21:39**  
Jakub

Could you expand on that a little bit? What specific part of the.. You said mumbles?

**00:21:44**  
SN

Yeah, it's.. It's very hard to understand the message, right? Both in terms of the quality of the sound and the volume, but also in terms of the content. Sometimes it's not very clear what's happening. I can see that they're making an effort to keep you updated when there are malfunction issues with the trains or the traffic stops. But they're not always very successful. Well, one thing that I think they're very, very bad at is the.. Like when these breakdowns happen, I'm not talking about the communications anymore, but it is also part of it.. When there is a breakdown and for an extended period of time and they have to redirect you to to an alternative, you often realize that there is no alternative, but you have to figure it out yourself. There rarely is enough help on the ground to.. Yeah. To get you out of that situation. But I've often been in that position where I at Frederiksberg, say I need to get in somewhere near either Central Station or Nørreport. I don't I actually don't know how to do that and I don't know the alternative fast routes. Um, yeah, of course I have Rejseplan on my phone, but, um, that's usually not helpful because it's trying to suggest that you take the Metro that is not working. So. Yeah. And they could do it, they could do a lot more in situations like this to help you. At least tell me - 'look, there's nothing else to do, just wait it out or walk it out or take a taxi or whatever'. Um yeah. Back to the to the communication like in the loudspeakers and uh. Yeah. And so on. It's.. That could also be improved.

**00:24:05**  
Jakub

In situations where what you just described, where the metro is not running, how do you normally find out about that?

**00:24:17**  
SN

Oh, you just go there, you see a huge crowd of people, and then you're like, oh no.. But then yeah, no, I'm also not the kind of I'm the kind of passenger who checks the route in advance. Like somehow I, I rely on.. Not on the train, that I have a lot of experience with and I know that can actually be very messed up. But that's the thing that the Metro is relatively reliable most of the time. That's another thing I like about it, that most of the time it is relatively reliable. But so, so yeah, it always comes as a surprise. Yeah. That when it's not working, I don't do anything to inform myself about it, but.. Is there information about it? Probably there is on

their website, now that I think about it, they probably put up some sort of warning when there's a major malfunction.

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**00:25:30**  
Josefin

You were talking a little bit about as well, like when.. When it breaks down and there's no people to help you help you out. Have you ever interacted with any personnel of the Metro?

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**00:25:42**  
SN

Yeah, I have asked like, so, what do I do? And most of the time. OK, now maybe I'm also exaggerating, but I don't really remember getting some.. Something very helpful. Most of the time they probably just tell you 'oh you have to watch the, you know, the signs and see what happens'. The ones that are on the spot in the metro station, they don't really know much about it, much more than what is communicated either through the loudspeakers or on the... What are they called.. This place at the metro station. Oh, I also remember my first trip with a new line. And that was a very weird experience because I didn't know which side of it to take and.. Right, it's a circle. So both.. So both were correct. But what I was looking for was somebody to tell me which one was the fastest one to get me to, yeah, where I want to get to. And then I remember he said 'oh, you can take both to get there'. So that did not help a lot. Now I don't know, maybe he was in a funny mode and I didn't pick it up because there was stressed or English speaking and he was not.. Yeah.. Whatever.

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**00:27:35**  
Jakub

Do you ever interact with any other passengers when you are taking the train or are waiting on the platform?

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**00:27:46**  
SN

No, not metro passengers. No, no, I'm usually not the kind of person who would be comfortable. Oh, yeah, having interactions that aren't necessary, but in, no.. No. On the actual train, yes, it has happened sometimes because there the chaos is even more overwhelming than with the metros. There you actually sometimes have to talk to your fellow passengers in order to figure out what to do. But not.. Not when it comes to the Metro.

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**00:28:28**  
Josefin

How do you feel when anyone interacts with you?

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**00:28:33**  
SN

That's, awkward of course. Oh, yeah, they usually, like if somebody addresses you on the Metro, it's probably to ask for help or money or something like that. Yeah.

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**00:28:55**  
Josefin

Do you generally feel safe on the Metro otherwise?

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**00:28:59**  
SN

And you know what, I actually do on the Metro itself, because most of the time it is very bright. OK, I also rarely take it at weird hours, right. It's mostly, you know, what you would consider normal times like mornings and late afternoons or early evenings or something like that. So, yeah, it



does, it does feel safe, I felt more unsafe on the.. What the hell is the word for 'perrong'?

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**00:29:43**  
Jakub Platform.

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**00:29:46**  
SN Ah! On the platform in Nørreport then, while using the Metro or while waiting for the Metro.

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**00:29:54**  
Josefin Could you elaborate on that a bit, like what has.. What's the situation in Nørreport been?

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**00:30:02**  
SN Well, there are.. I've been pickpocketed, let's just put it as it is. So it was basically on the on the stairs between the metro and the Øresundstrain platform, so 1 and 2, there's this very narrow and dark staircase. So I don't know if you.. il take the same route, but that's the fastest way of getting from Metro to the train. So, yeah, there was ironically a group of Romanian pickpocketers - I'm Romanian myself, I speak Romanian so I could actually understand the dialogue. It was ridiculous. But yeah, hands in my backpack digging out stuff while I was climbing the staircase is one example, of yeah, things that have made me feel unsafe there. There's also if it's a Friday evening or a weekend, there's a lot of drunken teenagers where you can feel worried about, you know, somebody accidentally pushing you in front of a train or something like that. People arguing that this kind of thing, not that.. Like you don't feel threatened, but you don't feel 100 percent comfortable being there.

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**00:31:43**  
Jakub And so how would you evaluated or described the Metro's overall design?

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**00:31:51**  
SN Hmm design, like visually, or?

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**00:31:56**  
Jakub Sure, yeah.

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**00:32:00**  
SN Yeah, I mean, I'm.. I'm trying to think about it like with the eyes of somebody who hasn't seen it before, but it might be more helpful to look back at situations where I had people visiting me and I was taking them on the Metro. And usually the first reaction is when they see the stations and the train is like 'wow this super cool'. So, yeah, I guess I agree with that. And usually the first reaction is when they see the stations and the train is like 'wow this super cool'. So, yeah, I guess I agree with that. It is mostly shiny and yeah, hi-tech looking, modern. Yeah.

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**00:32:46**  
Josefin But what about you as a commuter, do you have a different experience?

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**00:32:51**  
SN  
Hm.. I mean, I just.. I just don't, don't think about it in those terms, I think it's for me, it's just the a thing that will hopefully take me from A to B without a lot of hassle. And then I think that's the most important thing for me as commuter.  
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**00:33:17**  
Jakub  
And when taking the Metro, do you find the stations easy to navigate?  
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**00:33:25**  
SN  
No, I find the stations that I'm familiar with easy to navigate. And I have my own routines, right? Yeah, we get through this door and then we turn around this corner and we take this escalator and then we run off and so on. But I know if I'm in in a different.. At a different station, I often get confused. I'm usually very direction challenged. So maybe that's not the metro's fault. So I'm like, 'oh, is this escalator going down or why are there two?', you know, like that that sort of thing. 'Where is the one that takes me up?' Basically. 'I can only see the one that comes down'.  
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**00:34:15**  
Josefin  
You feel like you get a lot of help from signage and stuff. Is that helpful for you?  
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**00:34:19**  
SN  
No, not really. No, I'm usually not that good at reading signs and not because of the language. But, I don't know, something about how my brain is wired. And I, like I don't even look at the signs because I don't expect to get a lot of help from them. Like, I look at the displays, right. But for example, those those markers, also the markers for track 1 and 2, they're kind of small and not that easy to spot unless you know exactly where to look for it because. Yeah, because you're not new to the Metro. Right. You know what it looks like and yeah.  
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**00:35:05**  
Jakub  
Would you say that there are differences between the, what we would now call the older lines of the metro and the newer ones?  
,

**00:35:16**  
SN  
Yeah, I haven't used the new ones a lot, but they do still.. Last time I was on one, I still remember having this new and and shiny feel to it. Like things still smell, the fresh plastic and, yeah, that, that sort of thing.  
,

**00:35:42**  
Josefin  
Did you ever discuss your experiences with the Metro, with other?  
,

**00:35:48**  
SN  
You know, I think.. I think about it especially when negative things happen, like obviously the interactions with the stewards and that sort of thing, the delays. And I think I've spent quite a few text messages in my time 'ooh, metro is stuck between stops, don't know when I'll be there for that meeting, please start without me'.  
,

**00:36:16**  
Josefin  
Have you ever contacted the Metro company to share your experiences with them?

**00:36:23**  
SN

,  
Yes, I definitely have. With yeah, with that fine thing. Not not for any other reasons. And they answered quite quickly and very matter of factly. But yeah, I didn't necessarily like the tone, but probably because of the message that it contain. Also, you know, there's the thing when.. That is going to sound weird, but when when you're interacting with a company as an English speaker, you always tend to be in Denmark, at least, not so much in Sweden actually. But they the English is very poor and, yeah, and the content is affected by that. You know, the.. The message itself is somehow.. I feel that if they had written it in Danish, which would have been OK by the way, for me at least, I would have had a different amount of information, or like the usefulness of the message would have been better. I know I'm not supposed to be interviewing you, but I would really like to hear if you think the same or if it's just me. Yeah, but like I said, it's not just the metro. I'm writing with Skat recently, and I'm like 'OK, I give up, can we take this in Danish?'

**00:38:15**  
Jakub

,  
And so besides sending text messages, did you also talk about the Metro and your experiences with the Metro in person or online?

**00:38:28**  
SN

,  
Well, I guess, again, if it was something more out of the ordinary happening, I would definitely tell my colleagues about it at work or my boyfriend when I got back home - 'it was really memorable'. I would even tell my mom back home. But no, not not communicated publicly on the social media. I haven't done that, not about the metro. I have written some posts about train in general in, yeah, in this Øresunds connection, not about the Metro.

**00:39:10**  
Josefin

,  
Have you ever shared a positive experience or is it only negative ones?

**00:39:17**  
SN

,  
It's only negative ones. I think.. It would have been a rare occurrence for me to talk about something really positive. I.. It would have had to be really, really special for me to remember it and to talk to somebody about it.

**00:39:44**  
Jakub

,  
OK, well, I think that's that. OK, well then those were the main questions that we actually had prepared for you. We just have basically two more questions regarding the demographics. So the first one being, where do you live?

**00:39:59**  
SN

,  
I live in Malmö, Sweden in.. Do I have to be more specific, like what kind of..

**00:40:07**  
Josefin

,  
No, that's okay. What's your occupation?

**00:40:09**  
SN

I work as an administrative officer in the public administration of a university.  
,

**00:40:19**  
Josefin

All right.  
,

**00:40:20**  
Jakub

OK, cool. Really. Well, thank you very much for all your answers. That's very helpful. And we appreciate it very much.

## Appendix 2.9 - VG Transcript

- 00:00:19**  
Jakub OK, well, thank you very much for being willing to have this interview with us. We very much appreciate it. I just wanted to ask you for your consent that we actually record it and that we use it later on for our research. Is that OK with you?
- 00:00:35**  
VG Yes, it's OK.
- 00:00:36**  
Jakub OK, great. So then just to give you a little bit of an idea of what our research is about and what this interview will revolve around, Josefin and I are writing about the metro in Copenhagen. And what we are virtually interested in are your experiences with the Metro as such, with the company, with other fellow passengers, all all the things out there. So that is the overall focus that we have. And we have we have a bunch of questions prepared. If you don't understand a question or you don't want to answer it, feel free to say so. That's completely fine. And if you have anything else that you want to ask throughout, you are more than welcome to. So do you have any questions right now?
- 00:01:26**  
VG No. No.
- 00:01:28**  
Jakub All right, then I think we can start. Josefin, you want to kick us off?
- 00:01:32**  
Josefin Yes, let's get started. All right. So when you need to go anywhere in Copenhagen, what's what's your main way of transporting yourself there?
- 00:01:40**  
VG Depends on the weather, honestly. If it's very cold or rainy, I do use the metro or the bus. If not, I would use my bike. Normally, I could say I use my bike maybe 70 to 80 percent of the time. And then honestly, during the winter, I use the metro the most.
- 00:02:05**  
Jakub Yeah, so it's a it's more of a matter of convenience, is that what you're saying?
- 00:02:11**  
VG Yeah, it's also a matter of I'm not that used to using bike as my main transportation because I come from a country that we don't use bikes. So I don't know if you know or I should say, but I'm from Mexico, so I honestly learned how to ride a bike before coming here. So one one year or maybe two years ago now. So it has been a big change in how I moved from one place to another. I normally would use my car in Mexico. So being here, sometimes I do feel and I kind of have this guilt when you kind of talk to

Danes that you use the Metro. And I was like - Oh, you you didn't use your bike. So it's kind of like... Maybe it's relevant for you guys because it's like using the metro is kind of like a guilt trip for people. It's just like - Oh, you're being lazy and you're not moving - you know?

**00:03:05**  
Jakub

Have you ever experienced that you're being guilted?

**00:03:09**  
VG

Yeah, for sure. It's like- Oh, what did you... How did you get here? It's like - Oh, I came with the Metro. It's like - Oh, it's like this... Like little judgmental thing. I don't it's know, I don't want to talk poorly about Danish people, but yeah, it's a little bit like that. It's like - Oh, so you're not using your bike. - In a country that, you know, bikes are the thing to use. Yeah.

**00:03:36**  
Josefin

Well are there situations then when you wouldn't take the metro?

**00:03:40**  
VG

That I would or wouldn't?

**00:03:42**  
Josefin

That you would not.

**00:03:45**  
VG

I think it's just money wise, it's quite expensive to just use the Metro on its own and yes, sometimes the Metro doesn't, it's faster to either bike than taking the Metro because then you have to use the metro or a bus if you want to go to a specific place. Like I live in Nørrebro and my boyfriend lives in Islands Brygge. And like, it's shorter or... Yeah, it's better if I take the bus, which is longer, because if I would take the metro, then I would have to do like to switch in lines. So yeah. That's one of the reasons I don't use the Metro to come here, basically.

**00:04:34**  
Jakub

So in a way, in terms of your own needs, the Metro does not always get you where you need to go directly?

**00:04:43**  
VG

Yeah, exactly.

**00:04:49**  
Josefin

Go for it.

**00:04:50**  
Jakub

OK, then I'll go. So in terms of the Metro network as a whole, like, are you satisfied with it?

**00:05:01**  
VG

Like, generally, yes, I am, and especially because the line, which is the M3, it's a red one, just opened basically it was like very fortunate of me to move there because the metro, it's very close to my house. So I was very fortunate that when I came to Denmark, it just was about to open. And I think it was like two months or one month before opening before I came here. So it was very nice to have that opportunity. It was a little bit of a struggle for me to understand the metro system just because I don't use the Metro back home. So basically the Metro idea was a new thing to me, but it is actually quite intuitive and easy to understand. I do. I do like that of the Metro here in Copenhagen.

**00:06:03**  
Josefin

Did you ever take the Metro back home? What's your what's your view on the differences there?

**00:06:09**  
VG

OK, Mexico actually has one of the best metro in Latin America. It's considered one of the best ones. The only issue there is that the metro is mainly goes like around the city center. And where I live in, it was considered the outskirts, but now it is like the city. So we don't have a metro line that goes all the way to my house and of course, the insecurity, all of that Mexican melodrama. So that's why I don't use I don't use that much. But if I went to the city center, for example, I would leave it close to a metro. So I will leave my car to close to a metro station and use that because it's faster to get in and out of the city. But honestly, I would always take one of my friends (inaudible) Metro better because I'm not familiar with moving in metro lines. So, yeah, I had to be like, familiarized with that concept... Whole concept.

**00:07:12**  
Josefin

Right. So how would you say your general view of the Metro in Denmark is?

**00:07:18**  
VG

I think like compared to my experience in Mexico, it's. It's really good, like in terms of where it gets you and everything, it's it's really nice. But I think the biggest differences that I notice is like the cleanliness, the space between the people, even if it's crowded, of course, we're talking about Mexico has like 21 million people. So it's not comparable. But it is, you know, the time... The schedule is super on point, whereas in Mexico it's not. I think my biggest, like complaint about the metro here is when something goes wrong and they announce it that they only announce it in Danish and I don't speak Danish. So I'm like... And I just see people leave the Metro and I'm like - Oh, should I? OK, I'm going to go get off now because something's happening - but I don't understand what is happening.

**00:08:15**  
Jakub

Interesting .So when you are taking the Metro, how often would you say that you take the Metro on average? If we should say per month.

- 00:08:37**  
VG  
The thing is, as I mentioned, like during the summer and like springtime, I don't use the Metro at all, like maybe if we're going to - no. Yeah, I don't really use it on this. Like, maybe I have an injury or something, but I feel that I can't use my bike, so I wouldn't use it. But in the winter, like when it starts getting colder or super rainy and horrible, which is very normal for Denmark, but you get my gist, it would be maybe like. Like 90 percent of the time that I would be moving, either I would walk or just take the Metro.
- 00:09:25**  
Josefin  
All right, so we touched upon it a little bit already, but what if you had to point out what are some things that you really like with the Metro? Just could be anything.
- 00:09:33**  
VG  
I really like - You know, the little map that you can see where the little dot is, like shining where you're headed , I really like that. It's quite because, like, sometimes you're not even paying attention to, like, the station that you just passed. So then you're like and then you're like, oh, OK, I'm here. Then I have to go down at this point. So I like that. I like the displays of the like... Yeah. So when it's coming like the time and everything that it's really like... I think it's really nice that it's big. But maybe sometimes I'm not wearing my glasses so I can't read that much, I can't see from afar. So it's nice. And of course, it is also nice for older people that can't see that well. So I think that is super good. Um, what else do I like about the Metro? Yeah, I think all the signs that they have are very informative and clear, so the use of the use of colors and the like, the little lines or like the lines on the floor are very informative. So I do, I do appreciate that as a designer, because it's quite intuitive for users. Also, I really like the Rejsekort system.
- 00:11:05**  
Jakub  
Is there anything in particular that you like about Rejsekort?
- 00:11:11**  
VG  
I think it's the cleanliness of it, so in Mexico, if you want to, you can have a MetroCard. But if you for example, I don't use the Metro that much, I would just buy a ticket. So then you use coins to buy the ticket. So it's like kind of a dirty kind of situation, whereas here you can either top it off online or you can even do it in the machine. But the machine is actually quite nice because it's like easy to understand. So I do I do appreciate that. And the fact that you don't even have to register it so it can also be used for like tourists that can just like buy the card and use it if they're going to if it's feasible for them if going to stay longer or whatever. So it's quite nice that there's an opportunity to not only have it personally as a person living in Copenhagen, but also for people who are just visiting.
- 00:12:10**  
Josefin  
Have you ever experienced any issues with getting tickets?
- 00:12:17**  
VG  
Not really. No, never. Like, I lost my card once, but that's not their issue.



- 00:12:32**  
Jakub So do you pay for pay per ride or do you use the prepaid monthly ticket?
- 00:12:38**  
VG I pay per ride. Yeah, because I was honestly, just because I didn't know how much I would use it in the beginning, so I just got used to just paying per ride. I'm fine with that because I yeah, I don't think it would justify paying monthly for the amount of time that I use it.
- 00:12:58**  
Jakub OK, just to briefly circle back to the signage that you brought up before, can you elaborate on the signage that you talked about that is on the floor?
- 00:13:11**  
VG Yeah, like, well, I think right now it's more of the COVID thing of, like, kind of showing where you should go, like ways that you should walk around. But maybe it's not more of the floor ones. It's like, for example, I think it's in Kongens Nytorv. That you kind of can change from the M3 to the other the other colors so that you can see the lines on the like, if you go up the stairs, that you can see the lines on the walls. So it's like taking you. So this is the direction you should go. If you want to go to the other metros and this is where you come. And right now I know it by heart, but at the beginning it was like, OK, so this is where I have to go, especially if you're not familiar with, like, metro lines and things like that.
- 00:14:09**  
Jakub So it helped you kind of navigate the system, is that what you are saying?
- 00:14:12**  
VG Yes, exactly.
- 00:14:16**  
Josefin Well, if we elaborate even further on the design of the whole situation, how would you how would you describe the stations in general, like the station design?
- 00:14:27**  
VG Well, of course, the new ones are very nice. I do like that. Each one has like a theme or like. Yeah, like different materials that has been used. It's really it's like in the beginning when you first experience it, it was like a complete experience because you were like, oh my God, the stairs with blue here or the walls are red here. So then it's also like a like a little nudge or letting you know how or where you're at and how. Yeah. And how like things are around there. I don't, I haven't really seen anything of the reason behind it though, because I would imagine that the architects had a reasoning behind each selection of materials decoration or even like lighting. That would be interesting to know. Like oh why. Yeah. Why is it that there are some balloons in some of the metro stations and is that is that a reason? Is there reasoning behind it of the area that you're in? But that would be nice if that could be a bit of a storytelling there.

**00:15:44**  
Jakub                   So is that, is that, as you would be interested in knowing more as a passenger, why the stations look the way they do?

**00:15:54**  
VG                       I think so. I think it's more because of my background, which is design. So it's like I love when things have a little bit of a story or a little bit of a, you know, a secret or that you could also know. In Mexico, some of the stations have decorations according to the area that you're in. And it has to do a lot with like, the pre...like the Aztecs. And it's like, oh, this is I don't know (inaudible). And then it has a story like, you know, that is (inaudible), which, you know, a lot of like the reference like to where the like the area or what the area is defined for. Like, we even have, like icons that were designed for the Olympic Games that are one of the reasons that our metro line has been so like we now, and it's because the icons really represent the area that you're going to.

**00:16:59**  
Jakub                   Just to clarify, the experience from Mexico that you describe is from Mexico City.

**00:17:04**  
VG                       Yes. Yes.

**00:17:07**  
Jakub                   Yeah, interesting, so just now that you said that you use Rejsekort to get your tickets. Have you ever used any other way of getting a ticket or is this the only one?

**00:17:29**  
VG                       Yes, it's the only one. I haven't personally used it, but I was, yeah, with someone that at one point they just paid with cash. I remember that he was a very adamant about the government knowing where he was. So it was like he didn't like the fact that they could know where they where he was, not that he was doing anything wrong. But it's just that I think it's more that he was in IT. And all this surveillance thing, he was like, he didn't want that in his life. So he would pay in cash. Which was a little bit annoying because it's like then you have to make this transaction with someone and, you know, it takes more time to just like get in and just sit basically or like, you know, yeah.

**00:18:27**  
Jakub                   And so now that we talked a little bit about the positive or the good experiences that you had with the Metro. Are there any things that you would change if you could? Or did you have any negative experiences?

**00:18:45**  
VG                       Honestly, I wouldn't change anything. I think that my - well, yeah, the thing that I would change is what I mentioned before is that when something happens, if they like I know that I'm living in Denmark and that you should know their language and everything. But I think a little bit of acknowledgement that some people don't speak Danish would be nice just too - cause a lot of like most of the things in the Metro like have, you know, English and Danish kind of things that can inform you. But when they when

something goes wrong in the line and then just like somebody just speaking through the whatever megaphone thingy, it's just a little bit confusing of like what what should I do next? I think that's my biggest issue or that I would change.

**00:19:43**  
Jakub

And is there anything that you would add not necessarily change, but maybe add?

**00:20:06**  
VG

No, I can't think of anything on top of my head now.

**00:20:13**  
Josefin

All right, all good. Yeah, moving on from that one, have you have you ever interacted with any of the personnel around the Metro or on the trains?

**00:20:25**  
VG

Well, just the people who check that you checked in. Basically, I've interacted once when I think it was in December last year, not this year, like last last year. That the metro line was closed at night and, yeah, just like I went all the way down because I didn't know that it was closed, and then there was these people like this, like men just like there. And then just it was a little bit aggressive, I can tell you that. Yeah, I don't know, maybe they were stressed. I don't hold them against. Yeah, it's fine. But yeah, it was like it's closed and it's like oh ok, ok, fine. There was no sign or anything in the entrance or. But I'm sure that they communicated in another way, just I didn't catch it, you know,

**00:21:26**  
Josefin

Actually building on that, how would you say that the Metro is able to communicate regarding the trains and and just in general, how would you say their communication?

**00:21:37**  
VG

It's not great, because I. So if you take the Metro on the days before it's going to get closed, there is a sign saying, look, we will be closed from this day to this day. But if you don't use it on a regular basis, then you don't know that that day is that where it's going to be closed? And then I normally use like Google Maps to see like if I'm going somewhere, I don't know, whatever, then I use that. And Google Google map is not updated with the like. It's closed from this date to this day. So it will just give you like the normal route. And then you're like, oh, shit, I can't I can't do it now. So I know they do have Rejseplanen. So then I changed to that and then I have to check it there. Yeah.

**00:22:28**  
Jakub

OK, so would you say that in your experience, the Metro operates well?

**00:22:33**  
VG

Yes, yes, totally. I have never been late because of the Metro.

- 00:22:43**  
Josefin
- So you never got stranded or anything?
- 00:22:47**  
VG
- Well, oh, I know I did. Now that I think about it, I think I was coming back from yours with (inaudible) and we were switching lines at Kongens Nytorv. And then the other line was closed, like my line was closed. So then we had to find a bus, which was a little bit annoying. Yeah, but then again, it's like we didn't know it was going to be closed because we didn't see any signage that would say so.
- 00:23:20**  
Josefin
- Yeah. Would you say that it's easy generally to change from the Metro to a train or a bus or so?
- 00:23:27**  
VG
- Yes, I think that is it's really good in Denmark that you can - OK, that's not working - that you still have other ways of getting home. Yeah, it's super quick to find a bus.
- 00:23:46**  
Jakub
- So just coming back to the interaction with the personnel that you had, when they check your tickets, how would you describe that interaction overall?
- 00:23:58**  
VG
- Oh, I think it's very like... They like to assert their dominance, it's like - Show me your ticket - you're like, OK, like what I take off from it is this like maybe it's not a great job to do. So they don't like their job, therefore they're not really doing it with a lot of like happiness because you could you could still like say like, hey, can I check your ticket in a nice way that just like they bark something and they just like show you their machine and you're like - OK, here it is. I'm sorry, I hope I'm OK. And in the beginning, I was so scared because I didn't really know how the system worked until somebody explained it to me. So I didn't know if I was doing it correctly or if I was doing it incorrectly. So I was like, every time they check it, I'm like, I hope I did it right. It's like this like anxiety moment. So yeah, maybe it could be good to find a way to communicate for new users of like how to use the card. I still don't even know if I should. We had this discussion. We went to to Tisvilde and we use our Rejsekort for the train. And we were saying, like in each side when we we had to, like, jump to another train. And then we had I normally check in every time I come up a train and then I get to another one, I check in. And then this guy was like listening to us. And he was like, no, you don't have to do that every time, as long as you like do it at the beginning and at the end. It's fine. But I'm still skeptical and I'm still checking in every time I jump to another metro or line or any other transportation.
- 00:25:44**  
Jakub
- So there is some unclarity in how to use it?

**00:25:47**  
VG  
Yeah, I know it says, like, continue your journey, but I'm like, does it matter then if I did it here and then I just do it at the end of my journey, or should I do it each time? Yeah, I still don't know.

**00:26:04**  
Josefin  
Hmm, interesting what you said there, that there was someone that was listening in and interacted, would you say you normally would, but you said that you sometimes interact with other people when you're on the Metro.

**00:26:19**  
VG  
Not really. This was just like one off and he was like he was also international. So I think it was like he saw that we're a bunch of girls and it's also like we're a bunch of girls, the guy, whatever. But in my experience as being Latin and not looking like people here, and that's not Metro's fault, it's just the cultural difference. People don't really talk to me or sit next to me. So. Yeah.

**00:26:59**  
Jakub  
Is that is that a feeling that you have that people do not on purpose come to sit next to you?

**00:27:04**  
VG  
Yes.

**00:27:05**  
Jakub  
OK, how does that make you feel?

**00:27:08**  
VG  
Well. OK, so I'm Mexican, I traveled to the States a lot, and there's a lot of like, yeah, racism or. Yeah. And I... In my life I've learned to just pass it - like it is what it is. But then the whole, like, Black Lives Matter movement happened and you start thinking and checking yourself also because we all do shitty things. Sorry. I don't know. And so, but then you kind of realize that all those little things that happened to you that you don't assert as being bad, it's also not helping the change happen. So, yeah, I noticed that quite a lot in Denmark that, like, I could be sitting in their room next to me and people would rather stand or like or go to another cart, which is, you know, it is comfortable because then nobody sits next to me. But it is kind of like I've noticed it here.

**00:28:21**  
Jakub  
OK. Do you think that's a reflection of the society or do you think it's maybe conditioned by the situation?

**00:28:31**  
VG  
No, I think it's a reflection of society because it happened before COVID and everything. Yeah.

**00:28:40**  
Josefin  
Well, thinking a little bit in the similar area, do you say you generally feel safe on the metro here?

- 00:28:47**  
VG  
Oh, totally, yes. Yes, I have never felt... Well, maybe when there are a lot of, like, drunk kids, like... Drunk males, but it's just part of being a girl. But, yeah, it's just that. I've never felt like somebody's going to steal my stuff or anything like that. I, I honestly feel like if I would leave something, somebody would just take it to someone that I could pick it up later. So I don't see that much of a problem that.
- 00:29:29**  
Jakub  
Are there any particular aspects that evoke this feeling of safety in you?
- 00:29:45**  
VG  
I think...Cleanliness of the Metro, it makes it seem that it is taken care of. Therefore, there's people who are there doing their job, but it's also like it's well taken care of. So if something is well taken care of, then you're also well taken care of, in a way.
- 00:30:08**  
Jakub  
OK, so the cleanliness is the (inaudible).
- 00:30:12**  
Josefin  
OK. All right. And have you ever discussed your experiences on and with the Metro with other people?
- 00:30:25**  
VG  
I guess with my parents, like they also came here to Denmark when I came here just to kind of check everything around and they were really like impressed with the Metro and how quickly I got used to using it, because then I would be the one to be like - Oh, let's go. I'll take you with me and then I'll show you around. So, yeah, they they always kind of mention it when we're talking on the phone and everything. So, yeah, that's the people that I would have talked about it. I don't... Yeah. I have never had this conversation with anyone else, but I just remembered something that I would change or add to the Metro - So, the new line doesn't have really good reception for the phone. So if you want to kind of listen to a podcast or whatever on your way, you have to, kind of, download it or make sure that it's already been streaming. So therefore you don't miss it or you can't have calls, which is in some ways, it's nice because there's not people like talking on the phone, but. But I think it's just a matter of the new metro line. I think the old one is this good.
- 00:31:51**  
Jakub  
And so thinking about the holistic design of the Metro, now that you are a designer, how would you describe or evaluate the Metro's design?
- 00:32:07**  
VG  
I think it's it's quite sterile, but I think it's a good thing. I don't... I don't see it as a negative point where, like the actual metro is really like sterile. But the contrast with the like a very architectural design spaces outside, like makes it OK. They could actually coexist. So I do... I appreciate that sense of like yeah - You have this thing that is like very technological or like, in a way, futuristic kind of looking to like more of the aesthetics of the stations themselves. Oh, yeah, I also like, um, would like to mention another thing

that makes me feel safe is that the elevators are glass, like you can see through all the time. That makes it feel... You know, dark spaces are scary. Yeah, so it's like just knowing that people can see through all the time is quite reassuring.

**00:33:24**  
Jakub

So if I understand correctly, the design in a way makes you actually feel safe. Is that correct?

**00:33:33**  
VG

Yeah.

**00:33:42**  
Josefin

But I think that's most of them, no? Do you have any that you're thinking of still?

**00:33:53**  
Jakub

No, not I'm... Well, yeah... I know that you've been kind of contrasting the M3 and the other lines. How... Do you have different experiences as a user between... When comparing these lines?

**00:34:12**  
VG

Well, the... I think it's just a matter of the fact that it's new and old. So, it's like, of course, I like My Line. I call it My Line. I like that line better because it's new. It's like you can see that the wagons are new. The stations are prettier. Yeah. Even though they all are well kept. You can see the difference between like a new and old, but it's just that I wouldn't say anything else. I think they do manage to kind of keep the same standards for both.

**00:34:51**  
Josefin

Well, actually, yeah, the last thing I have is on that - regarding the trains. What is your... Yeah, what's your feeling about the design of the trains themselves?

**00:35:02**  
VG

Yes, I mentioned I do like the... Like the colors and everything, like really - it's like a calming experience that. It's just I mean, it is kind of like easy to like if you know about materials that you know that those materials are easy, easy to clean and everything. So it's also like it's nice to know about that they're using the correct materials, correct lighting and the color scheme that really appeals to the kind of feeling that they want to evoke. So you don't want to be, like, hyped up when you get to the Metro, you want to kind of like cool down because you're going home normally, or even if you're going to a party you like, you're in a transport. So you shouldn't be like bumping up, you know, even though people get drunk in the Metro but even if you're not allowed to.

**00:36:11**  
Jakub

Oh, right. Well, I think that's it.

**00:36:15**  
Josefin No, I'm good.

**00:36:16**  
Jakub No, OK, then we just have a couple of demographical questions just to put some specificity on this interview. So where is it that you live in Copenhagen?

**00:36:26**  
VG I live in Nørrebro, right next to the Bispebjerg station. The S-line.

**00:36:33**  
Josefin And what is your occupation?

**00:36:37**  
VG I am an industrial designer, but I'm doing a master's in strategic design and entrepreneurship at KDK.

**00:36:45**  
Josefin All right.

**00:36:46**  
Jakub OK, awesome. Well, I think that's all the questions we had. So thank you very much for participating in our interview. It was really interesting and helpful. So thank you very much.

**00:36:58**  
VG Thank you, guys. Anytime. Whatever you need.



## Appendix 3 – Full Coding Overview with Descriptions

Name	Description	Files	References
<b>1. Rider Profile</b>			
1. 1. Residence	<i>Where the individuals live</i>	9	10
1. 2. Occupation	<i>The occupation of the individuals</i>	9	9
1. 3. Frequency of Riding the Metro	<i>How often individuals ride the Copenhagen Metro</i>	6	9
<b>2. Attitudes towards Public Transportation</b>			
2. 1. Means of Transportation	<i>How individuals transport themselves around Copenhagen</i>	8	10
2. 2. Avoiding Public Transportation	<i>Situations when individuals would not use Public Transportation in Copenhagen</i>	4	7
2. 3. Reasons for Taking Public Transportation	<i>Reasons for why individuals would use Public Transportation in Copenhagen</i>	7	13
2. 4. Reasons for Taking Metro	<i>Reasons for why individuals would use the Copenhagen Metro</i>	9	26
2. 5. Reasons for not Taking Public Transportation	<i>Reasons for why individuals would not use Public Transportation</i>	7	19
2. 6. Comparing Metro Systems	<i>Individuals comparing the Copenhagen Metro with other Metro systems in the world</i>	8	26
<b>3. Metro Usability</b>			

3. 1. Metro Network	<i>The coverage of the Copenhagen Metro network</i>	8	25
3. 2. Station Location & Surroundings	<i>The individual's opinion regarding the location of the Copenhagen Metro stations and their experience of the station surroundings</i>	7	15
3. 3. Convenience of Use	<i>The convenience of using the Copenhagen Metro</i>	9	27
3. 4. Bikes in Public Transportation	<i>The experience of when others or oneself brings a bike on the Copenhagen Metro</i>	3	6
3. 5. Frequency of Trains	<i>How individuals experience the frequency of trains by the Copenhagen Metro</i>	8	17
3. 6. Speed of Transportation	<i>Individuals discussing the fastest way of transporting themselves by using different means of Public Transportation in Copenhagen</i>	6	14
3. 7. Reliability	<i>How individuals experience the reliability of the Copenhagen Metro</i>	7	16
3. 8. Operational Issues	<i>Situations regarding when the Copenhagen Metro has not functioned properly as experienced by the individuals</i>	8	28
3. 9. Replacement Transportation	<i>Individuals opinions and experiences regarding replacement transportation when the Copenhagen Metro is not operating</i>	5	8
3. 10. Rejseplanen	<i>Experiences with using Rejseplanen</i>	5	9
3. 11. 3 <sup>rd</sup> Party Involvement	<i>The effect the companies partnered with the Metro have on individuals</i>	7	13
<b>4. Tickets</b>			
4. 1. Buying Tickets Through the App	<i>The experience of buying Metro tickets through the DOT and DSB apps</i>	6	11
4. 2. Buying Tickets with Rejsekort	<i>The experience of buying Metro tickets using Rejsekort</i>	5	12

4. 3. Economic Aspect	<i>Considerations regarding prices and costs expressed by individuals</i>	6	23
4. 4. Zoning Issues	<i>Individuals' experiences regarding issues resulting from Copenhagen Metro ticket zones</i>	5	8
<b>5. Information Availability</b>			
5. 1. Orientation & Navigation in the Metro	<i>Individuals finding their way around the Copenhagen Metro</i>	9	46
5. 2. Language Barrier	<i>Individuals experience language barriers that affect their experience</i>	5	16
5. 3. Communication	<i>How the Copenhagen Metro communicates information</i>	7	34
5. 4. Signage	<i>The presence of signs in and around the Copenhagen Metro and their effect on the experience of the individuals</i>	9	21
<b>6. Effect of Design</b>			
6. 1. Check-in & Check-out	<i>How the checking in and out process in public transportation in Copenhagen is perceived</i>	7	14
6. 2. Accessibility	<i>The accessibility of the different Copenhagen Metro stations</i>	7	11
6. 3. Station Design	<i>Individuals' experience regarding the design of the Copenhagen Metro stations</i>	9	65
6. 4. Train Design	<i>Individuals' experience regarding the design of the Copenhagen Metro trains</i>	8	46
6. 5. Seating on the Train	<i>How individuals experience the seats on the Copenhagen Metro trains</i>	6	14
<b>7. Influence of Others</b>			

7. 1. Personnel Interaction	<i>The different ways individuals have interacted with Copenhagen Metro personnel</i>	9	31
7. 2. Ticket Control	<i>The experience of individuals getting their ticket checked on the Copenhagen Metro</i>	9	22
7. 3. Social Aspects	<i>How other people affect the behavior of the individual in regard to the Copenhagen Metro</i>	3	10
7. 4. Presence of Others	<i>How the presence of other riders in and around the Copenhagen Metro affects the individuals' experience</i>	9	22
7. 5. Feeling Safe	<i>Individuals experienced regarding safety related to using the Copenhagen Metro</i>	9	30
7. 6. Rider Interaction & Avoidance	<i>The experience individuals would have from interacting with other riders on the Copenhagen Metro and from avoiding each other</i>	9	24
7. 7. Alcohol Consumption	<i>The use of alcohol on and around the Copenhagen Metro by others and the individuals themselves</i>	7	12
7. 8. Sharing Experiences	<i>How individuals share and discuss their experience regarding the Copenhagen Metro with others</i>	8	12
7. 9. Cultural Aspects	<i>Cultural differences experienced by individuals when using the Copenhagen Metro</i>	4	12