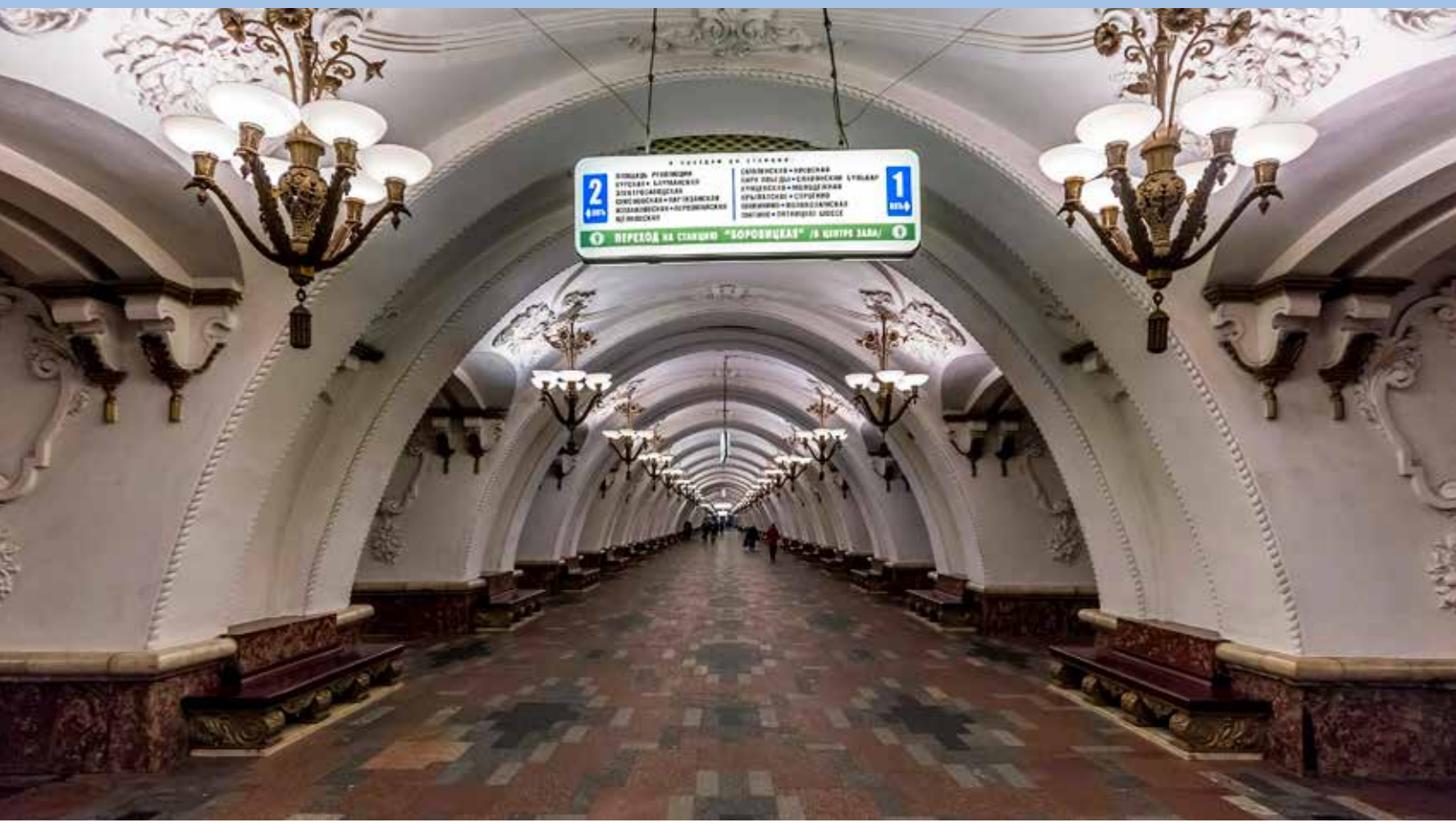

SELF-CONCEPT AND GLOBAL PASSENGERS:
APPLYING MARKETING THEORY TO PUBLIC TRANSIT RIDERSHIP

By Jon M Shapiro and Joseph Rye

INTRODUCTION

Mass transportation shapes a region's economic configuration, competitiveness, and peoples' aesthetic, social, and environmental quality of life (Phillips, 2004; Schoelen and Thebpanya 2016). While transportation and distribution are advanced within business literature (Kotabe and Czinkota 1992; Nechaev et.al 2021; Tansuhaj and Gentry 1987; Tsurumi and Tsurumi 1999), mass transportation research on ridership is examined almost exclusively within public policy (Taghvaee et.al 2023).

This paper aims to illuminate how self-concept, commonly used within marketing, is essential within public transportation planning, as it is intertwined with the rider's decision to use public transit and relationships with the system.

Photo credit: Alex 'Florstein' Fedorov, Moscow Arbatskaya Metro Station, Russia, 2016.
https://commons.wikimedia.org/wiki/File:Metro_MSK_Line3_Arbatskaya_(img1).jpg

This is significant because more public transit usage leads to fewer automobiles and decreased polluting gridlock, facilitating better urban sustainability. Specifically, we synthesize data from participant observations and in-depth interviews with women across five continents to delineate how mass transportation helps to shape the rider's self-concept (or perceptions of oneself) and systematically forms essential relationships. We derive and explain this through a four-stage model of global ridership based upon self-concept and transit bonds, which activates ridership involvement.

MASS TRANSPORTATION: DEFINITION AND GLOBAL BENEFITS

We define mass transportation as the process of moving people between and among geographic locations, not within a private automobile. Except for most carpooling, a passenger is not ordinarily responsible for driving the vehicle, and the system is open to participants who pay to enter the transit mode. Mass transit is considered economical and environmentally sound compared with more personal modes, such as automobile usage (Adams 1973; Dhakai and Lee 2005; Horn 1978, Li et al. 2024). However, its usage often diminishes personal privacy, point-to-point convenience, and perceived personal safety (Thompson and Matoff 2003; Jalowica and Vanderburg 1989; Li et al. 2024). Mass transit tends to be less hygienically clean for the passenger than non-mass transit modes (Miller 1988). Globally, *captured* riders with no other affordable options for getting to work, school, or travel on personal trips tend to utilize many mass transportation systems (Dhakai and Schipper 2005; Jalowica and Vanderburg 1989; Zhang et al. 2022).

Photo credit: Bruno Makori, Pexels, Crowded Subway Train, São Paulo, SP, Brazil, 2023. https://www.pexels.com/photo/crowded-subway-train-19695999/

As the world's population numbers explode, it is becoming increasingly challenging for urban areas to find environmentally sustainable ways to transport workforce members throughout the necessary locations (Ridley 1995; Santos et al. 2023). Many BRIC countries (Brazil, Russia, India, China, and other emerging economies) are investing monumental sums to construct new subway system lines and branches to address these challenges (Brown 2008, Lei et al. 2022). Similarly, in rural areas, as well as in suburbs, the challenge of transporting workers may serve as an economic development impediment (Sanchez et al. 2002). Rural and suburban mass transit solutions share the same aim to make economic opportunities more obtainable and to save significant amounts of fuel consumption (Hughs 2008; Litman 2014), but they face an even more difficult challenge due to the general lack of population densities and widely scattered trip generators generally found outside urban areas.

First-rate mass transportation can make a region more economically competitive by attracting an educated workforce, enabling full mobility to lesser-educated worker segments, and making a place more sustainably livable. For instance, based on discussions among mass transit professionals, Hong Kong and Tokyo are two outstanding global urban mass transit systems (Killada and Raju 2018). These cities have dynamically vibrant economic bases and expensive real estate, and the metros rank at the top financially and in terms of service (Killada and Raju, 2018) as measured by performance metrics, such as ridership per day and capita. The metros serve the function of attracting skilled workers to relocate from throughout the world. These systems allow for zero or shared automobile ownership in areas where parking is extremely scarce and traffic congestion acute, effectively providing mobility without the expenses and responsibilities of auto ownership. This works to reduce carbon blueprints.

Environmentally, mass transportation is vital in reducing fuel usage and greenhouse emissions and can help facilitate an ecologically-conscious society (Phillips 2004). Overall, the developing world (countries with lower average wealth and growing economically) is experiencing a proliferation of automobile sales and the introduction of new car companies (Brown 2008). In the long run, such consumption may be unsustainable due to harmful greenhouse gas emissions. Through improved mass transit, new modes of traveling can help reverse this trend (Grengs 2002). A deeper understanding of ridership and its relationship with the public transit system may play an essential role in this process.

MARKETING: DEFINITION AND LINK TO SUSTAINABLE RIDERSHIP.

Marketing is a study of exchange relationships (McIntyre et al. 2004). One exchange-based example is a person who rides the local metro system. Here, the rider exchanges a fare, and the metro system provides the rider transit between two or more points. Marketing's primary goal is to anticipate and understand peoples' needs. Needs are gaps between one's current and needed or ideal state (McIntyre et al. 2004). Thus, a gap is an unmet need, which can also be defined as a problem. A product or service aims to bridge the gap or solve the problem.

Gaps can be physical and/or psychological, such as adverse hunger, hydration, shelter, safety, belonging, love, achievement, and reaching one's full potential (Noltemeyer et al. 2021). Most advertisements aim to tell people how a product or service will bridge such gaps (or meet their needs or solve their problems) and why they should be motivated to act.

Importantly, products and services bridge two types of unmet needs: utilitarian and symbolic. Utilitarian needs are functional. For example, does the Metro get you from your origin to your destination on time, economically, and safely? Symbolic needs help shape a person's self-concept or perceived image of who they are or want to become (McIntyre et al. 2004).

According to the Self-Concept theory, one's real self exists and may be based on how society sees them. Additionally, the ideal self exists, or who the person wants to become (Ekinci and Riley 2003). For example, does the Metro help people reach their real-self objective of facilitating a sustainable community with fewer cars? Similarly, does the Metro help people reach their ideal selves by creating a better mindful experience and improved physical fitness? Generally, the real and ideal selves merge, leading to powerful purchasing and bonding motives (Ekinci and Riley 2003).

Photo credit: Jiri Dockal, Pexels, Futuristic Underground Escalator in Naples Italy, Neapol, Kampánie, Itálie, 2024. https://www.pexels.com/photo/futuristic-underground-escalator-in-naples-italy-30204979/

This is vital because understanding these motives within a metro system context can help a service resonate with potential riders and facilitate a bonding relationship between the person and the public transit system. Research suggests that symbolic bonding is powerful and creates more active customers or riders (Chriss 2007). The strength of bonding can help cultivate a ridership base size, commitment, and sustainable transit culture.

Photo credit: Dziana Hasanbekava, Pexels, Having a conversation on the train, 2020. https://www.pexels.com/photo/a-man-and-a-woman-sitting-on-a-train-while-having-a-conversation-5905249/

SELF-CONCEPT THEORY WITHIN MARKETING

This study focuses on the Self-Concept Theory because, fundamentally, all product offerings have symbolic functions (symbols that benefit the user) that help to shape the consumer's self-concept (Aaker 1999; Grohmann 2009; Holbrook 2008; Ostovan and Nasr 2022; Sirgy 1982; Van Acker et al. 2010). According to the Self-Concept Theory, people consume (acquire and use products and services) to shape a real and ideal self (Sirgy 1982). For instance, purchasing a shirt may help shape the person's aesthetic image (self-concept), which can help create a strong bond with this clothing article.

It is important strategically to understand how diverse groups of riders globally identify with their Metro system experiences and how this connection develops in order to facilitate this process successfully. People are motivated to use services that help them develop their Self-Concept, and this motivational bonding can be remarkably strong.

Overall, products and services have two dimensions: (1) functional (what does the service do?), and (2) symbolic (what does the service mean, or how does it shape one's self-concept)? Typically, mass-transit system development focuses on functional needs, such as infrastructure, routing, and scheduling. This explicit orientation on riders' functional or utilitarian needs (e.g., getting from the origin to the destination on time) is balanced against available funding for metro vehicles and stations (Taylor et al., 2009).

However, far less emphasis and research have examined the rider's self-concept (self-image and associated symbolic needs). This neglect within public transit research is important because the type of relationship people have with their Metro can play a strong role in how the system is perceived and utilized. Most importantly, stronger emotional bonds lead to a more loyal ridership with passionate advocacy. This, in turn, feeds into the goal of sustainability, which includes reductions in car usage that destructively impacts the natural environment.

Photo credit: Lara Jameson, Pexels, Man entering Gates of Subway Train, New York, USA, 2021. https://www.pexels.com/photo/man-entering-gates-of-subway-train-9623664/

Interestingly, within the personal transportation industry, firms emphasize branding (such as attributing personalities to brands), develop products that provide emotional bonding, and help develop customers' self-concepts. For instance, commercials for sleek cars may help build an adventurous person's image or self-concept. Researchers examined the motorcycle industry, and each segment (or ridership group) has a unique self-concept. In addition, the industry works to develop self-concept through product design and special promotional events such as bike rallies (Schouten and McAlexander 1995).

Photo credit: Thomas Hawk, Miss Subway, New York, 2005. https://www.flickr.com/photos/thomashawk/12241051

Within metros and other mass transit modes, efforts to create a self-concept have been limited and include promotions such as "Meet NYC Ms. Subway" and "Ms. Moscow Metro," where management puts fashionable women onto posters with the hope that riders relate to the youthfulness and sporty imagery of these emergent celebrities (Brooks 1997, Malik et al. 2020). Overall, marketing efforts to facilitate the development of self-concept are generally scarce due to minimal marketing budgets as most transit agencies are public, and with that comes an expectation of fiscal caution.

Photo credit: David McKelvey, Buskers on the Métro, Paris, Ile-de-France, 2013. https://www.flickr.com/photos/dgmckelvey/9975288324

Self-concept is essential in choosing, using, and enjoying a service. People tend to consume a related group of products that coincide with and shape their self-concept (Grohmann 2009). The Metro may be part of this group if it fills the correct needs. As conveyed by regular riders, several benefits of adopting the mass transportation usage lifestyle include environmental (sustainability) benefits, increased daily exercise, improved connectivity with one's city, and increased personal freedom. If a person views the Metro as a place to connect with others or an avenue towards being an environmentalist, this will affect their usage and feelings regarding this system. The following section discusses factors affecting the mass transit environment and ridership self-concept.

PUBLIC TRANSPORTATION'S MARKETING ENVIRONMENTAL

Mass transit usage varies by context. In some places, systems are utilized regularly by members of all socioeconomic strata (Mattioli et al. 2020; Phillips 2004; Sanchez 2002). These tend to be more prominent and leading municipalities (e.g., Tokyo, Shanghai, Moscow, London, New York and San Francisco). In numerous locations throughout the United States and the developing world, mass transit is often perceived as a low-status choice that raises concerns regarding safety and hygiene (Dodson et al. 2006). Many users rely on mass transit, as they typically cannot afford personal transportation.

The danger factor is not limited to locations inside the transit vehicles, as the perception of general lawlessness and crime on the streets deters many from using mass transportation, as most mass transit trips involve walking to access the station and then to access the destination (Rye and Shapiro 2008). There is often a negative social stigma associated with system usage, which becomes a self-fulfilling prophesy because lack of support (through riding and voting) leads to inferior systems (Dodson et al., 2006; Rye and Shapiro, 2008) and the global pandemic has only exacerbated these perceived and actual safety issues.

Place density greatly influences public transit demand. For example, within the U.S. suburban context, people live in lower-density areas within spread-out domiciles. In some areas, they tend to commute to spread-out locations. Thus, the system lacks concentrated origins and destinations, which makes it challenging to facilitate quick and efficient logistics (DeGuzman et al. 2013; Hughs 2008). Regardless of how skilled the planners at the local mass transportation agency may be, in most instances, personal transportation (for those financially and physically capable) is a superior option (Hopkins 2017). However, emergent innovations such as riding applications, transformative planning, and AI may help circumvent some obstacles (Hopkins 2017; Hughs 2008).

Public transit usage decisions are frequently determined by functional service factors such as ride frequency and connectivity to essential destinations (Taylor et al., 2009). Functional utility (or benefit) is crucial in decision-making and significantly impacts overall satisfaction (Taylor et al. 2009). However, self-concept interacts with product development across functional innovations (Zhang 2022). The meaning of the system within the rider's eyes may affect sustainability (Rye and Shapiro 2008). Most passengers desire solid utilitarian benefits (e.g., dependable and fast service) (Taylor et al. 2009). At the same time, identity with the product or system facilitates long-term emotional bonding globally (Shapiro et al. 2008). This study examines the role of self-concept within the bonding process.

Photo credit: Marc A. Hermann, MTA, NYC Transit EAGLE Team Enforcement, 2024. https://www.flickr.com/photos/mtaphotos/53956260301

METHODOLOGY

Context and Informants

We interviewed women transit riders (hereafter referred to as informants) with varying levels of transit riding experience within five major cities (Moscow, Shanghai, Cape Town, New York, and Buenos Aires). We selected cities with extensive transit networks where there are both public-transit dependent as well as independent (choice) riders. Experts within their respective regions know these systems to be functionally and symbolically dynamic (Rye and Shapiro 2008).

Self-concept plays a role in shaping the relationship between the user and the product, and we wanted to examine diverse cultural contexts and dynamic product usage situations. Given the numerous cultural differences existing among Asians, Africans, Europeans, South Americans, and North Americans (Hall and Hall 1987), self-concept and culture are likely to be key factors in product relationships. **Below is a brief description of the chosen public transit systems, including their primary components.**

MOSCOW

Moscow is the largest city in Europe and the capital of the Russian Federation. The Moscow Metro features a series of radial lines radiating from the city center and three circular ring lines that connect them. Trains frequently stop (headways average 90 seconds in peak hours) and are consistently on time. The Moscow Metro also features extensive safety systems, a modern ticketing system, and numerous stations, each serving as a passenger hub and a unique architectural and design element. Some stations are known for their grandeur and artistry, reflecting the Soviet era's emphasis on "palaces for the people." The Metro is supported by five MCD (Moscow Central Diameters) Commuter Rail lines, a monorail, 38 tram (light rail/streetcar) lines, and over 1000 official bus routes (Gilbert, 2023).

A bus network radiates from each station to the surrounding residential and commercial zones. Most major streets in the city are served by at least one bus route. Historically, many of these routes were served by trolleybuses (electric buses powered by overhead catenary systems) that have recently been replaced by battery electric buses.

Moscow Metro Facts:
12 lines
192 stations, 61 of which serve multiple lines
177 stations are underground, 15 elevated
Total rail network length: 610 kilometers
4545 railcars
7.132M average passengers per day

Photo credits: Safa Daneshvar, Moscow Ploschad Revolutsiy (Revolution Square) Metro Station, 2024. https://commons.wikimedia.org/wiki/File:030521-Moscow-IMG_8688-2.jpg

Photo credits: Christophe Meneboeuf, Metro Crowded, Moscow, 2008. https://en.m.wikipedia.org/wiki/File:Moscow_MetroCrowded_%28pixinn.net%29.jpg#globalusage

SHANGHAI

The Shanghai Metro is one of the world's newest (opening in 1993), most significant, and busiest rapid transit systems. The Shanghai Metro system is the world's second longest metro system by route length, totaling 808 kilometers (502 mi), and the second largest system by number of stations, with 515 stations across 20 lines. It also ranks first in the world regarding annual ridership, with 3.88B rides delivered in 2019. Its primary components include modern trains that operate on 20 lines, some fully automated, with transfer point stations strategically located throughout the city (service.shmetro 2025). Headways vary by line and time of day, ranging from 110 seconds to 13 minutes. The operating hours are shorter than many other peer systems worldwide, from 5am to 11pm 7 days a week.

In addition to the new MagLev high-speed train connecting the Pudong Airport, Shanghai also boasts one of the first trolleybus systems (now 110 years old) featuring 300 trolleybuses operating on 12 routes, including the new (2017) Yan'an Road Medium Capacity Bus Transit System, a trolleybus bus rapid transit line running in reserved bus lanes in the center of Yan'an Road. Of the nearly 2000 bus routes in the Shanghai region, this trolleybus BRT line is now the system's highest daily ridership bus or trolleybus route, averaging 54,000 daily boardings.

Shanghai Metro Facts:
20 lines
515 stations
99 stations are transfer points to multiple lines
Total rail network length 808 kilometers
7394 railcars
10.281M average passengers per day

Photo credits: Yhz1221, Wikimedia Commons, MagLev Train Bottom Left, Shanghai Pudong (montage), China 2013. https://commons.wikimedia.org/wiki/File:Shanghai_Pudong_(montage).jpg.

Photo credits: Machs Einfach, Shanghai metro in motion, China, 2008. https://www.flickr.com/photos/machseinfach/2942703938

CAPE TOWN

Cape Town's public transit system features the newer MyCiTi bus rapid transit network supporting the older Metrorail. This five-line commuter rail metro system traverses most of the sprawling and lower-density suburban areas radiating from a base in central Cape Town. MyCiTi Bus (BRT), a 36-route bus rapid transit system operating 2–20-minute headways in peak hours on rubber-tired BRT vehicles with dedicated lanes, regular schedules, and a smart card payment system. MyCiTi Bus also features a form of congestion pricing, where fares in the peak commute hours are higher than midday and weekend/evening fares.

In addition to these modes, regional buses provide intercity bus service, and "minibus taxis" are seen commonly in and around Cape Town, providing extensive first and last-mile coverage. The system is not considered highly safe to use in the evening hours. It is supported by a network of taxis and on-demand private vehicles popular with locals and tourists for evening usage (Wander Cape Town 2025).

Cape Town Metro Facts:
4 lines (electric commuter rail ONLY – plus 36 lines of BRT)
122 stations **97 of which sell transit tickets**
Total rail network length: 460 kilometers
1094 railcars
500,000 average passengers per day (plus 65,000 on MyCiTi Bus)

Photo credits: Edward Russell, MyCiti BRT Adderley station, Cape Town, South Africa, 2015. https://commons.wikimedia.org/wiki/File:MyCiti_BRT_Adderley_station_(21812360016).jpg

BUENOS AIRES

Buenos Aires, Argentina's capital and largest city, features a heavy-rail subway system supported by extensive surface bus lines. Its subway system, known locally as **Subte**, began in 1913 and is the 13th oldest in the world and the first in the Spanish-speaking world. The Subte comprises six underground lines (A, B, C, D, E, and H), connecting various neighborhoods and downtown. The system also includes a surface "Premetro" or "P" line streetcar, as well as an extensive feeder bus system known as "Colectivos" or "Bondi." With 150 Colectivo routes spanning most areas of the metro area, a person rarely finds themselves more than a few blocks from frequent bus service.

In 2011, the Buenos Aires Colectivo launched its premier product, the Metrobus Bus Rapid Transit System. The system consists of five lines, each featuring elements of BRT, including off-board fare payment, dedicated bus lanes, and high-frequency (2–15-minute headways, 24-hour per day) service. Many stations have remarkable aesthetic designs (Subterráneos de Buenos Aires S.E. (2025).

Buenos Aires "Subte" Facts
7 lines (includes Premetro streetcar line)
108 stations
90 stations underground 18 premetro stations are above ground
Total rail network length: 64.1 kilometers
545,523 average passengers per day (+1M passengers per day on the RapidBus BRT)

Photo credits: Tim Adams, Buenos Aires Metro, Subte Station, Argentina, 2014. https://commons.wikimedia.org/wiki/File:Subte_metro_in_Buenos_Aires,_Argentina.png

Photo credits: Miguel A. Monjas, Vagon de la línea 2 del subte de Buenos Aires, Argentina, 2006. https://commons.wikimedia.org/wiki/File:20060128_-_Subte_de_Buenos_Aires.jpg

NEW YORK CITY

New York City is the largest city in the United States, known for its cultural diversity, economic influence, and iconic landmarks. NYC's subway system, which opened in 1904, is one of the oldest and most extensive in the world. Its primary components consist of 472 stations and 36 lines over 665 (1070km) miles of track. The subway covers all five New York boroughs and operates 24 hours daily, with headways varying from 2-10 minutes in peak commute hours (Metropolitan Transportation Authority 2025). Governed by the New York Metropolitan Transit Authority (MTA), the subway is supported by 19 commuter rail lines (8 Metro-North, 11 LIRR), 337 bus routes, and ferry operations. MTA's daily average total ridership is 3.6M, with nearly 66% (2.2M) generated from the subway rail system. Station designs include subterranean, at-grade, and elevated stations with a utilitarian design and standard entrance markings. (Metropolitan Transportation Authority 2025.)

We sought women as informants because we were interested in examining issues of safety and self-concept. Based on participant observation, gender is a central domain of interest in safety. To summarize, we sought out riders with differing riding experience and commitment levels with the systems (see Table 1).

2025 New York Subway Facts:
36 lines
472 stations **49 serve multiple lines**
60% of track and stations are underground **40% of track and stations are elevated or at grade**
Total rail network length: 1070 kilometers
6712 railcars (2016)
2.2M average passengers per day (subway only) (plus 1.4M daily bus & commuter rail rides)

Photo credits: Daniel Schwen, Crowded subway car 74th Street station, New York, 2005. https://commons.wikimedia.org/wiki/File:NYCSub_7_car_exterior.jpg

TABLE 1

SUMMARY INFORMATION ON INFORMANTS

NAME	CITY	AGE	STAGE
Tatyana	Moscow	18	1
Alona	Moscow	20	2
Oxana	Moscow	28	2
Lena	Moscow	30	3
Katya	Moscow	30	4
Olga	Moscow	30	4
Maylei	Shanghai	18	1
Mary	Shanghai	19	2
Lulu	Shanghai	20	2
Sherry	Shanghai	26	3
Mindy	Shanghai	30	3
Susan	Shanghai	39	4
Marge	Cape Town	20	1
Merna	Cape Town	25	2
Sheila	Cape Town	28	2
Anna	Cape Town	28	2
Nonia	Cape Town	31	3
Terrie	Cape Town	40	4
Nina	New York	18	1
Crystal	New York	27	2
Helen	New York	40	2
Sharon	New York	26	3
Terrie	New York	87	3
Evelyn	New York	45	4
Maria	Buenos Aires	18	1
Elena	Buenos Aires	19	1
Maya	Buenos Aires	27	2
Sofia	Buenos Aires	45	2
Angela	Buenos Aires	22	3
Emma	Buenos Aires	32	4

DATA COLLECTION METHODS

This study employed an emergent design unfolding across two phases, and each data collection phase guided subsequent phases (McCracken 1988). First, we conducted participant observations and informal interviews over 24 months at Moscow Metro and the New York City Subway System. During this period, fifty informal interviews were completed with riders to explore the feasibility of the study, identify issues important to them, and determine the feasibility of finding people willing to participate in in-depth interviews. This stage concluded that the study was relevant regarding self-concept playing a role in the experience and riders' enthusiastic interest in participating in interviews.

Second, we conducted 30 in-depth interviews over 2 months over five continents: Africa, Asia, Europe, North America, and South America, and covered five respective mass transit systems: Cape Town, Shanghai, Moscow, New York, and Buenos Aires. We interviewed informants with fluent English-speaking abilities to minimize translation problems, and we also worked with a host-country translator to facilitate understanding and reduce ambiguity. Each informant had lived within the host municipality for at least 18 years. We interviewed women because of our interest in safety issues and to follow up on past mass transit research, including gender (Hamilton and Jenkins 2000; Rye and Shapiro 2004).

Photo credit: Wallace Lan, Old women on the bus, 2009.
https://www.flickr.com/photos/wallace-lan/

Thirty informants were engaged in personal interviews conducted in an open-ended format. The design of the interview structure aimed to empower informants to guide the discussions, facilitating the emergence of rich and diverse perspectives. We recruited informants while they were waiting for their rides at the busiest hubs within their respective transportation systems. We invited informants to voluntarily participate in an academic study, ensuring their privacy by not recording any names or personal information. The interviews commenced with broad, introductory questions to help the informants feel at ease. Subsequently, several key areas were explored, including their knowledge of mass transportation, their experiences using the local systems, their successes and challenges in navigating the transit system, and their overall attitude toward the study (McCracken 1988). Based on the analysis of this data, we generated new questions and evolved the design to include an additional set of interviews. These interviews aimed to clarify any sources of confusion, gather further insights into emerging domains, and explore inconsistencies among the informants. Sampling concluded after reaching thirty informants, which was at the point of redundancy.

DATA ANALYSIS

Transcription of all interviews preceded the interpretive analysis of the qualitative data, which occurred through an iterative approach of moving between the data and the literature to identify a logical chain of evidence and develop a coherent conceptual framework. For example, at high levels of ridership commitment, violations of service reliability were accepted by the riders, which contradicts findings at earlier stages. Throughout the iterative process of analysis and writing of the results, the primary data were used to (a) challenge and refine the evolving framework and (b) ensure that the findings were accurate (Thompson 1997).

The following section describes the mass transportation adaptation through a four-stage model of global ridership based on self-concept and transit bonds: *Casual*, *Captured*, *Involved* and *Partnered*. These findings support key self-concept-based elements as shown in Table 2.

TABLE 2

SUMMARY INFORMATION ON INFORMANTS

Stage: Number and Name	Nature of Relationship Bond	Nature of Consumption	Self-Concept	Stage Reached
Stage 1: Casual	• Minimal political involvement • Minimal system trust • High risk of adverse outcomes	• Discrete riding experiences • Event oriented • Abundant use of technology with confusion in finding the best transit information. • Poor system knowledge • Group dependent	• Real self-forming	Tatyana Maylei Marge Nina Maria Elena
Stage 2: Captured	• Medium bond • Weak loyalty	• Involuntary and regular rider • Technology Confusion Diminishing • Mass transportation dependent • Emphasizing functional benefits	• Real self is marginalized	Alona Oxana Mary Lulu Merna Sheila Anna Crystal Helen Maya Sofia
Stage 3: Involved	• Identification with system forming • Increasing loyalty	• Diverse and affluent • Voluntary usage • Better system knowledge • Better use of technical applications • Valuing functional and symbolic	• Chance to ponder self to form ideal self • Metro part of the ideal self	Lena Sherry Mindy Nonia Sharon Terrie Angela
Stage 4: Partnered	• Strong bonding and identification • Strong loyalty • Metro as a close family member	• Metro is part of me • Part home, office, and playground • Integrative usage of technology	• Real and ideal self more fully integrated	Katya Olga Susan Terrie Evelyn Emma

FINDINGS

Stage 1: Casual

Most informants (riders) commence their system usage as *Casuals*. These informants engage in typically discrete experiences and tend to be in recreational modes where using the system is not required for survival. Culturally, in this stage, *Casuals* view the metro system as an obstacle that is problematic to navigate. At the same time, it is exciting because it connects informants to a new venue or experience (e.g., a concert, school, work, museum, or special party). Symbolic advertisements, icons, and atmospherics (music, light, and olfaction) connect to their shared lived experience.

Please See Table 3 - Tatyana (Moscow)

Within this group, economic status varies depending on the context. Most "*Casual*" informants are experiential risk-takers, younger, and more educated than the general passenger public. Typically, *Casuals* are students or tourists traveling into the metropolitan center for recreational activities or job interviews. The main reason *Casuals* initiate mass transit usage is their desire for stimulation and change, which they achieve by exploring the cityscape. The willingness of a *Casual* social group to attend events or explore markets often drives motivation.

Please See Table 3 - Maylei (Shanghai)

System trust tends to be minimal at the first adaptation stage (Shapiro et al. 2008). Many *Casuals* feel underconfident in terms of where to go if the train will arrive there on time, which direction or platform to board the train, or which train number to catch. Due to their lack of experience and knowledge, they tend to be susceptible to crime. Additionally, they tend to have a shallow relationship or connection with the Metro system. Typically, whenever possible, they ride with an expert rider who helps navigate the system and provides education on how to navigate it. When alone, many *Casuals* struggle and find the experience to be stressful, sometimes associated with dangerous or adverse events.

Please see Table 3 - Marge (Capetown)

Photo credit: Francesc Ketut Subiyanto, Pexels, Women Sitting in Train Car Laughing, 2020. https://www.pexels.com/photo/women-sitting-in-train-car-laughing-4907162/

Fear for safety resonates throughout the *Casual* group. Many have seen and experienced rough, criminal situations.

Please see Table 3 - Maria (Buenos Aires)

Typically, the *Casual* informant has minimal transit-related political involvement, and forges limited civic engagement. However, connections and commitments deepen if the transit experience is memorable and positive. Public transit strongly influences the overall experience of a target destination. In other words, if the *Casual* informant has fun at the destination, the tendency is to associate this with the total metro experience (Grohmann 2009). Thus, the depth of the relationship grows.

In terms of self-concept, the successful metro system enables the *Casual* to feel like part of an exciting event and at one with the greater community culture. In many cases, for the first time, the *Casual* is no longer dependent on parents or guardians for transportation, and this helps to facilitate a rite of passage into adulthood (Schouten 1991). Below, Nina discusses safety and the move toward independence.

TABLE 3

DATA-SUPPORT WITHIN STAGE 1: THE CASUAL STAGE

Nature of Informant and Data Support
Tatyana (Moscow): We would use the marshrutkas [a mass transit van] and Metro to attend disco parties and gatherings around the central ring. One story that comes to my mind was night out in the city's center, somewhere around Red Square. It was amazing to walk around and have fun with the friends all night. We walked up to the doors of the Metro right before opening, around 5:30 – 6:00 am and we were surprised how many people there are also waiting for the Metro, that probably walked and spent time with friends like us. We talked and laughed and looked at stars. When the doors opened, we walked in and took a train to the area where we live. The stations were well lit up, and everything looked beautiful and exciting…I always worried about getting lost or the Metro shutting down at night.
Maylei (Shanghai): I like the subway because of the freedom it gives me. When my mother is working, I can take a train and shop with my friends. Usually, I am traveling alone, but I am still happy to see the city, and this gives me great freedom. I do not like the bus as much. It is too hot and sometimes dirty. I enjoy the Metro…there are always new places to find.
Marge (Capetown): On the weekend, we would take the bus to the ocean and enjoy the day with nature. It is scary because you don't know who will be at the stations….When I was 15, the two men robbed with the knife, my sister and me, at the stop on the way to the cinema…, I handed them my purse and they left me….
Maria (Buenos Aires): As you can see, it is hot crowded and hard to breathe. Watch out, pickpockets will grab any money, I take nothing with me. The condition here is tough, and I always feel scared and have to be careful…..
Nina (New York City): Taking the subway is so much fun because we can go to the markets and check out exhibits without a problem. It took me time to learn how to use the subway, but it is easy when it's not rush hour…..I was afraid of the crazy people who you hear will grab your bottom and fondle you, but it has been safe so far…it helps me to be independent and free.

Please see Table 3 - Nina (New York City)

Overall, *Casual* informants are comfortable using technology, but many are novices in their ability to utilize transit applications optimally. These beginners are learning to utilize mapping applications and other options when planning trips optimally.

IMPLICATIONS

In the *Casual* stage, individuals actively initiate their self-concept and form relationships. Generally, few formal processes are in place to train *Casuals* to use the mass transit systems effectively. Identifying and training *Casuals* through innovative school programs and integrated marketing communications may be possible. Some public transit agencies employ special promotions and fares for youth. *Casuals* often want transportation options, are eager and able to learn new skills, and can develop into lifelong transit users. It is strategically essential to understand that multiple stakeholders affect *Casual*'s perceptions, decision-making, and ability to access the service. For example, school principals, teachers, superintendents, and parents are typically critical stakeholders (Rye and Shapiro, 2008). *Casuals* are a key group that serves as early adapters or innovators (early user groups of products) who are more likely to become later-stage (core) riders throughout life, regardless of their socioeconomic status.

Photo credit: Susan Sermoneta, Pexels, Woman meditating on the subway, NYC, 2006. https://www.flickr.com/photos/en321/144836101

Stage 2: Captured

The *Captured* is highly mass transit-dependent and often has few transport-based alternatives. Although diverse, this group consists disproportionately of less affluent citizens, early-staged workers, students, and disabled citizens (Sanchez 2002). *Captured* informants may exhibit dissatisfaction, tend to possess vital system insight into system improvement, and often experience marginalization within the scope of the transit system. Frequently, they are the least likely to be able to afford the service and characteristically have the fewest services and promotions targeting their needs (Rye and Shapiro 2008).

Please see Table 4 - Alona (Moscow)

Riders typically leap into the *Captured* stage involuntarily. Early on, there is little or no emotional commitment to the system or the drivers and a dearth of system-related pride. Generally, riders feel trapped depending on the Metro and city and are passive system users. There are typically low levels of system trust. Unfortunately, many in this group feel the planners did not design the transit services for them. This group feels low status and often experiences high stress.

Please see Table 4 - Crystal (New York)

Within China, this stage group appears to have more acceptance of using the Metro and greater civic pride. This pride may be related to the concept of Yuarn, where all relationships are predetermined and out of the person's control (Kluckhohn and Strodbeck, 1961).

Please see Table 4 - Mary (Shanghai)

Utilitarian (or functional) metro-service-based gaps and benefits predominate in this *Captured* phase (e.g., commuting to work and school), although many riders also go shopping and to events. Some find the Metro to be the only or primary way to connect with people from within their society. Thus, relationships with drivers and other passengers are of germane importance. Some schools, such as New York City, educate students to understand that they are bettering their community through this mobility choice.

TABLE 4

DATA SUPPORT WITHIN STAGE 2: THE CAPTURED STAGE

Nature of Informant and Data Support
Alona (Moscow): I take the trains every day to school, they are great but for me expensive…. There are no evening student discounts, and the trains can be crowded. When the bus that takes me to the Metro is packed and I feel it thick to breathe. ….we do our best, but this is a lot of all of my money…and only choice…
Crystal (New York): Without the trains and buses, I would have to walk. I work as a cleaner and go to many places. The subway is terribly hot, and I am afraid of fainting. The city is dirty, and the subway stinks….this is the only way I can keep my work…I wish there were no cars in the city because it is becoming dirty. They have to improve the trains and make them cheaper.
Mary (Shanghai). We have a beautiful system, and I love taking it around the city….Yes, there are discounts for students, and it costs very little. On the way to friend's house or to the shop, I listen to music, think about my dreams, and watch the screens (high definition monitors on most train cars)…This makes me happy.
Merna (Capetown): No, I don't own an auto. I plan to get a job after I graduate… I plan to save (to buy a car). In Capetown, you can easily survive with Goldenrod (name of private bus firm) and get almost anywhere. It is a good price compared with driving…. Unless I call my brother, I use the Goldenrod bus.

Being *Captured* can arise from circumstances such as attending a distant school or having limited economic resources. Many riders feel disempowered. If the transit agency engages people from this group to provide service improvement feedback, they often become advisory board members (Rye and Shapiro 2008).

Self-concept is frequently associated with the experience of achieving full integration within a total institution, as articulated by Goffman (1959). Thus, regardless of whether a captured rider views the system positively or negatively, most feel powerless or stuck. Many individuals acknowledge their contributions to environmental sustainability; however, they simultaneously believe that owning a car would enhance their social status. Many see their transit usage as temporary and strive towards a future where they will own and drive a car. At the same time, the Metro is a big part of their life. It enables them to connect to places, the greater community, and people within the system. This may provide opportunities for electric rideshare integration in instances where cars are extra beneficial, especially within less densely populated areas.

Please see Table 4 - Merna (Capetown)

Stage 3: Involved

Informants within the *Involved* stage characteristically begin to identify with their Metro and seek to find ways to integrate it into their lives. This relationship is voluntary. *Involved* informants frequently prefer utilizing their Metro system despite the availability of more straightforward alternatives. Many are now part of the workforce or are more advanced in their schooling. They enjoy the convenience and community connections that are forming. They appreciate the mental space created to ponder ideas and often view the Metro as a place to observe life and reflect on potential future directions. *Involved* informants frequently relate riding the public transit system with civic and national pride. The individual's self-concept is intertwined within the system, resulting in greater satisfaction. They have become more sophisticated in using the system, expert on route decisions, and identifying shortcuts.

In this stage, *Involved* informants feel connected to a ridership culture. The extended self becomes part of the system, and the local culture shapes this relationship (Grohmann 2009; Sirgy 1982). For example, in China, being part of dynamic Shanghai and traveling all day on leisure is part of being a fortunate Chinese person.

Please see Table 5 - Sherry (Shanghai)

Cultural symbols that link people to events are directly associated with the Metro. (Grohmann 2009). For instance, in Moscow, metro murals of political leaders, famous musicians, hockey and gymnastic stars, and stunning architecture can be seen throughout the system. *Involved* informants feel a growing pride and cultural connection.

Please see Table 5 - Lena (Moscow)

Overall, public transit helps the *Involved* informant connect to the best elements of the place, resulting in the desire to engage the Metro as the primary option, regardless of prevailing alternatives.

Please see Table 5 - Nonia (Capetown)

For some, the Metro integrates into one's ideal self during the *Involved* stage. Many riders strive to become more civically *involved* and view the public transit system as a unified arm within their lives. *Involved* informants are also more likely to use the Metro recreationally. They value the utilitarian benefits and also develop increased social connections. They often travel with friends, even when not working.

Please see Table 5 - Angela (Buenos Aires)

This group tends to be young and more affluent. Many participate in the local workforce or are toward the end of their high school experiences. Many *Involved* informants are not transit-dependent. Regardless of usage status, most look forward to riding the Metro and being part of the place they love. *Involved* informants tend to have formed more system trust (Ganesan 1994; Moorman et al. 1992; Morgan and Hunt 1994; Shapiro et al. 2008) and desire to improve things. They understand better how to circumvent system problems or are willing to live with them.

Photo credit: Vika Glitter, Pexels, Calm young lady sitting with newspaper and suitcase in train, 2014. https://www.pexels.com/photo/calm-young-lady-sitting-with-newspaper-and-suitcase-in-train-4829870/

TABLE 5

DATA SUPPORT WITHIN STAGE 3: THE INVOLVED STAGE

Nature of Informant and Data Support
Sherry (Shanghai). Riding the trains is a big part of my life. I spend at least 2 hours a day doing this…It gets me to all parts of this amazing city, and I use the bus for the other places…. In the morning, I see people from my area, and we smile. Even when there is a delay, I know this is a small problem and things will be fixed.
Lena (Moscow): Riding the Metro makes me part of this great city and proud of Russia. Each Metro stop describes our great past and is artistically beautiful. It makes me think a lot about my country's great past. I am lucky to live in the best city, and I spend my free time going to the park and theater and getting active rest…After work, we go to the café and meet our best friends. The Metro stops working at 2 (A.M.)…it is always fun to watch the people and think about our lives in Moscow.
Nonia (Capetown): I ride the bus all over the Cape. I love the nature and feel connected to this part of the country. I love the freedom and can get almost anywhere I want. This is why I usually leave the car home.
Angela (Buenos Aires): It is easy to get around on taxis, but I love being part of this city. Down here (Metro), you feel like you are part of a special flow. It is easy to get around with family and experience great parks….
Terrie (New York): I think they charge too many taxes and the elderly get squeezed. The politicians should offer us seniors ways to see the city at an affordable rate. I write many letters to the agencies telling them not to raise rates for the elderly and poor. I love taking the trains because I don't have to worry about parking, and I am doing my share to not kill the environment…and to improve things.

Please see Table 5 - Terrie (New York)

For the *Involved* informants, self-concept becomes more complex. Riders tend to feel part of the system and are grateful to have a way to navigate and experience their community. However, the relationship is medium-bonded because they sometimes use a taxi or ride-share when they can afford it or if it is more convenient than the Metro. Moreover, many dream of using personal transit modes more regularly; however, bonding with the Metro strengthens and forms part of one's real self.

Involved informants utilize technology more sophisticatedly and frequently to experience the system less stressfully. Given this growing bond and shifting self-concept, mass transportation managers have the opportunity to develop a brand identity through promotional tools, which can connect it with the *Involved*'s self-concept. In addition, student informants who sit within the *Involved* stage typically take advantage of unlimited ride passes when utilized within hometown transit agencies. Given that the Metro is becoming embedded within this group's self-concept, transit agencies and firms can work to reinforce and determine ways to extend both usage and the depth of the relationship. This embedded self-concept will enable more *Involved* informants to reach the final stage.

Photo credit: Ikhlasul Amal, Nusantara" Super-Executive Train Wagon, Indonesia, 2011. https://www.flickr.com/photos/ikhlasulamal/5982632577

Stage 4: Partnered

The transit system has become an increasingly integral part of the *Partnered* informant, who idealizes the mass transit system as an approach toward life enrichment. Through the Metro, the *Partnered* informant can reshape herself into who she wishes to be. It may be through power walking, jogging, parties within the transit system, sports, dating, social networking, games, and/or fashion design. The Metro is an accepted and endeared part of life. Many *Partnered* informants are affluent and could readily afford to use an automobile or limousine but would miss the opportunity of being part of the "city pulse." *Partnered* informants tend to use myriad GPS uploads and mapping applications. For many, the transit system serves as an office and playground simultaneously.

Additionally, *Partnered* informants are more likely to be environmentalists and strive to create a better place. Mass transportation is a key mechanism toward integrating the real into the ideal worldview and a cost-conscious, convenient mobility option, avoiding high parking and fuel costs. Indeed, functional elements such as scheduling rides close to the origin and destination and short between-ride times are also vital parameters. Typically, these *Partnered* informants comprise older youth and adults, who tend to be increasingly affluent, educated, culturally *involved*, interested in the environment, and value voluntary simplicity (a simplified lifestyle).

Please see Table 6 - Evelyn (New York)

*Partnered*s typically develop a vibrant appreciation for globalization and tend to be transcultural (Shapiro et al., 2008). *Partnered* informants firmly commit to their Metro, which now plays a profound role in their lives. This bond is strong and cannot be easily separated. For instance, many Russian citizens view the Moscow Metro as a living museum of Russian pride, and many *Partnered* informants collect photographs and cherish the historical past and the political ideologies espoused.

Please see Table 6 - Katya (Moscow)

For the *Partnered* informant, there is reflective personal affection, and the Metro turns into a friend, where each dyadic partner works to improve the other. To the *Partnered* informant, there is no other judicious way to travel. Passengers utilize the Metro for play, work, connecting with friends, romance, and community. The train is part of the *Partnered*'s home; the person would feel empty without this connection. System trust is like that of a close family member.

The *Partnered* understands the system and accepts that problems happen. Thus, relational trust emerges (Shapiro et al. 2008). While they will advocate for system improvements, service shortcomings will do little to weaken this relationship.

Please see Table 6 - Susan (Shanghai)

TABLE 6

DATA-SUPPORT WITHIN STAGE 4: THE PARTNERED STAGE

Nature of Informant and Data Support
Evelyn (New York): Taking the train between the city and home is a special part of my life. I am a vegetarian and just ran 3 miles along the ocean. Now, I am on my phone and designing the showroom for the next fashion show. We will be in Manhattan's fashion district in 22 minutes, according to my phone, and my meeting is in 30....I make good money and could have a limo take me to work, but then I am part of the problem.....We have a group of friends...If you come here in the morning, we are playing cards or discussing our free time. We have become great friends. You see lots of these on the train...We go to movies, and a lot of relationships are formed and ended in these cars. Going into the subway is more congested and not as relaxing, but it is the biggest system in the greatest city in the world.
Katya (Moscow): We live half our life in the Metro and it is rich. We have parties; I play my violin with our orchestra at different areas (within the Metro). Russian history is very deep, and our Metro shows us how we as a people come together and become great. Have you seen the stops in the Center Ring? I work in the area of urban planning, and we are looking to expand the Metro as Moscow grows. Cars are making the air dirty, and expanding the Metro will help in many ways. I do a lot of my work down here (in the Metro)....Online, our information is improving, but everyone is helpful.
Susan (Shanghai): We are on the bullet train and it goes up to 300 kilometers an hour. Our trains are inexpensive, safe, comfortable, and entertaining. There are high-definition LEDs in each car, and they show us the best Chinese and international fashion shows, sporting events, and advertisements. To me, this system is like Shanghai...it's like a friend. We can do everything and experience the most exciting city easily. In a car, going to the airport takes 2 hours, but on this train, only 23 minutes. I use my mobile phone to buy tickets and get deals at the restaurants. The best shopping is often inside the Metro....I read a lot about how they will expand and improve this line. This makes me proud and excited about our future!
Terrie (Capetown): I have a car but prefer to ride a bus when I go shopping, for a picnic, or meeting with a family. The shops' parking is overpriced, and the gasoline prices are very high, so I like to save and take a bus. This system is very inexpensive and safe. It saves gas and gives us the chance to talk, look out the window and see Clifton and very beautiful ocean areas. I am part of the Cape and travel freely because of the buses. I have used Goldenrod since being a baby...it is great for locals....for visitors, they want you to use taxis, and it is hard to follow the schedules...

The gap diminishes between the real and ideal self (Sirgy 1982). This shift directs the Partners' emergent values, image, and goals to be compatible or situated with those of the ideal self. Through connections with the city and the Metro brand, the Partner dreams of a better place, and the metro system becomes a vehicle for this vision. It also becomes part of the *Partnered* informant's self-identity.

Please see Table 6 Terrie (Capetown)

IMPLICATIONS

It is valuable strategically to identify *Partnered* riders, demonstrate appreciation, and cultivate them into ambassadors, sources of system information, and individual teachers. This group also tends to possess local political power. They can often identify other key constituents and provide rich insight into what works and fails within the mass transit system.

It is also essential to understand how, within a particular place, cultural symbols help to shape self-concept shifts. The *Partnered* can elucidate such information, which can be employed to shape service and promotional decisions.

DISCUSSION

This paper examines self-concept in public transportation as an essential strategic domain. Continued research in this area will help facilitate better public transportation systems that integrate riders' lived meanings, which play a powerful role in their decision-making processes (e.g., riding and enjoying public transit).

Self-concept plays a role in how people make decisions regarding transportation usage. The more we understand how riders make decisions and what facilitates satisfaction, the more likely ridership and satisfaction will increase, which reduces the harmful effects of automobile pollution within our fragile environment. Any such avenue toward system improvement also promises to improve global quality of life.

This study introduces a 4-stage process through which mass transportation riders pass to become bonded and loyal to their public transit system. This process is vital in that it illuminates how self-concept interacts with bonding, commitment, and mass transportation usage. The previous lack of emphasis on public transit relationships is unsurprising. Strategists often focus on technical parameters within technologically advanced industries, and mass transit is no different. Easily accessible and consumable system information, accessed by riders in the early stages of the process, can do much to expedite the 4-stage process and launch *casual* riders into lifelong transit partners. Much of the global mass transit community can benefit from a perspective and value shift toward a self-concept focus. Mass Transportation is a highly integrated system that goes beyond the important physical product and scheduling concerns. It starts with the rider's self-concept and considers the total experience. A planning approach that breaks political boundaries promises to add value to the region's people (Gordon 2005; Yaping et al. 2005).

The data suggest that riders go through four stages of system adaptation. The domains that trigger movement from one stage to the next include a situational context (e.g., graduation from school or a different job) and a strengthening relationship with the transit system, grounded in a developing self-concept.

Transit managers and public policymakers should recognize the role of self-concept in emergent system policy and service development. Most importantly, it is crucial to utilize a multi-constituent approach when developing transit systems that empower members of each stage. Every person within a society can provide valuable insight. Developing better mass transportation systems requires a rich understanding of how riders shape the system and a better ability to identify and connect with key decision-makers. Effective systems address significant ridership challenges and reduce many existing barriers to usage.

Lastly, mass transportation systems must learn to transcend political boundaries to be more effective. Often, transit systems compete for resources, and conflict inhibits their ability to provide what is best for all constituents.

Municipalities will benefit from improved transit systems as planning becomes more functionally integrated, recognizing that riders seek a comprehensive solution to their transportation challenges. Integrating mass transit systems' multi-constituent perspectives and fewer political boundaries promises better public transit solutions. This project is limited because it examined a narrow segment of riders and included only informants fluent in English to enrich the interview data. Future research that includes informants who speak only the host language promises to provide additional insight regarding self-concept and ridership experiences regarding product adaptation.

Future research might also consider how self-concept is related to the transit system brand and how specific symbols feed into the mass transit planning process. Innovative marketing research methods aid transit leaders in better understanding the types of mass transportation service offerings that fit the self-concepts within a local culture. Mass transportation should respond to constituents' needs and inspire people to realize their ideal selves. Interactions between ride frequency and other functional factors related to symbolic consumption are integral to the planning process and should be further developed and connected through ridership communications.

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