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Los Angeles

Trans on Transit:

The mobility and public transit experiences of transgender and nonbinary people

A dissertation submitted in partial satisfaction of the
requirements for the degree Doctor of Philosophy in Urban Planning

by

Tam J. Guy

2026

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2026

ABSTRACT OF THE DISSERTATION

Trans on Transit:

The mobility and public transit experiences of transgender and nonbinary people

by

Tam J. Guy

Doctor of Philosophy in Urban Planning

University of California, Los Angeles, 2026

Professor Anastasia Loukaitou-Sideris, Chair

Successful public transit requires understanding the full breadth of rider experiences to inform policies and procedures. Prior research shows that gender affects security and mobility, yet binary gender metrics erase whether and to what extent people with marginalized gender identities experience transit differently. This national mixed methods study addressed the US public transit experiences of transgender and nonbinary adults.

I designed the survey and semi-structured interview instruments to answer the following questions. What are the public transit experiences of transgender and gender nonconforming people? How do these experiences influence/affect their use of public transit, as well as their mobility and travel more broadly? In what ways are these experiences influenced by other individual characteristics (e.g. age, race, appearance)? Which gender conformity aspects influence harassment on public transit? How do these experiences inform our understanding of social hierarchy enforcement in the public spaces of transit? And, what policies/strategies can help improve the transit experiences of transgender people?

Based on quantitative and qualitative analyses of the data from 353 online surveys and interviews of 22 survey participants, this study showed that gender identity, particularly at the intersection of race and gender, results in different experiences for riders—notably a likely increased risk of harassment for trans and/or nonbinary riders, more so for trans and nonbinary riders of color. The surveys and interviews both demonstrated that infrastructure failures and social hostility limit mobility. The interviews revealed how trans and nonbinary riders conceptualize social norms of who deserves what treatment. The data was not clear on which gender conformity aspects influence harassment.

Interventions to improve the transit experiences of transgender and nonbinary people include better transit service, attention to physical infrastructure, shifting social norms towards respect for all people, and research centering the knowledge of trans and nonbinary riders. Though these interventions would benefit all transit riders, improving the experiences of transgender and nonbinary people holds its own value.

The dissertation of Tam J. Guy is approved.

Brian D. Taylor

Kian Goh

Amy Lubitow

Anastasia Loukaitou-Sideris, Committee Chair

University of California, Los Angeles

2026

DEDICATION

For my queer and transit communities. May our futures be bright.

In memoriam: Hannah R. King, Ph.D., dear friend

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Financial support was provided by the University of California, Los Angeles.

BIOGRAPHICAL SKETCH

Tam studied trans and nonbinary riders' experiences on US transit as part of a larger effort to understand the interactions between gender, public space, and public transportation.

As a doctoral candidate in Urban Planning, Tam expanded and strengthened their research and teaching skills while serving the university and the field. They worked on transit and workforce development research for the State of California, earned graduate certificates in Gender Studies and Writing Pedagogy from UCLA, worked with the UCLA Gender Recognition Act Task Force and Implementation Committee as a Graduate Student Association appointee, and represented graduate student interests in the Queer and Transgender Interest Group of the Association of Collegiate Schools of Planning. They developed their pedagogical approach to engage students in the work of public policy through observation, research, and writing.

Tam created and taught the following registered courses at UCLA.

- 495 Teaching Luskin Public Affairs Courses, required course for Public Affairs TAs
- 183 Queer Public Policy: Urban Planning & LGBTQIA+ Lives, LGBTQ Studies elective
- 98TW Developing Socio-historical senses to understand urban places, Writing II

While a graduate student, Tam received the following awards.

- 2023 Collegium of University Teaching Fellow, UCLA
- 2022 Outstanding Teaching Assistant, Public Affairs Undergraduate Program, UCLA
- 2019 Dwight David Eisenhower Transportation Fellowship Program (DDETFP), US DOT
- 2018 Graduate Summer Research Mentorship Award, UCLA
- 2015 American Institute of Certified Planners Outstanding Student Award, University of Utah
- 2015 Robert Farrington Medal for Excellence in Urban Revitalization Award, University of Utah
- 2014 Point B Research Scholarship, National Institute for Transportation Communities (NITC)
- 2013 Lassonde Social Enterprise Associate Fellow, University of Utah
- 2012 Lassonde New Venture Development Associate Fellow, University of Utah

Prior to their doctoral program at UCLA, Tam earned the following degrees.

- 2015 Master of City and Metropolitan Planning (MCMP), University of Utah
- 2013 Master of Business Administration (MBA), University of Utah
- 2010 Bachelor of Science in Business Administration (BSBA), Portland State University

Tam also earned a graduate certificate in Urban Design from University of Utah. They focused their MCMP on smart growth and transportation to better understand the equity impacts of urban planning, specifically how land use, transportation, and green (ecological) infrastructure work together to produce different outcomes for people of different social groups. During their MBA, Tam studied strategy and innovation with a focus on consulting to learn how to go from research question to new knowledge to launching and operating an organization, product, or service. Tam's interest in urban planning and business both stem from a drive to use policy and management to make it easier for people to make sustainable choices in their everyday lives.

CHAPTER 1 INTRODUCTION

January 2019, Washington, D.C. Fresh snow covers the sidewalks as I head to the train for morning sessions of the Transportation Review Board Annual Meeting. I'm bundled up in a long outdoor-sport winter coat, gloved hands in my pockets, hood over my beanie-covered head, scarf around my mouth and nose, slacks and dress shoes visible from the knees down. A man hanging out on the sidewalk says something to me as I approach—some mundane phrase guys regularly say in passing to acknowledge one another. Several steps before I pass him, his read on my gender changes; he decides that I am not a man, that I am not a woman, that I am some *thing*. He launches a litany of slurs at me in a tone of anger and disgust. He physically moves a step toward me as I pass, the litany continuing with seemingly every category except race. I keep my face forward, focus on not slipping as I keep my pace brisk. The Metro entrance is less than a block away, if I make it to the escalators, he probably won't follow me into a space with other commuters and the possibility of police. I make it to the station, mind racing—not about being harassed, as people have said hateful things to me based on how they see my gender since my childhood—but about transportation research. What do we know about trans people on transit? And, how does this knowledge add to our understanding of public space, transportation, and society?

Public transit, such as networks of bus and train routes, enable millions of people to move throughout cities to do what they need to do in their daily lives without the costs and hassles of private automobiles. Unlike travel by private car, people traveling by public transit must be near one another in public spaces to reach their destinations—on public streets, ostensibly open to everyone, and in stations and vehicles, open to anyone who pays the fare to ride. Extensive research into public transit experiences points to many travelers' fears of harassment and/or assault in public spaces (including the public spaces of transit vehicles), which affect their transportation choice behaviors. They might take a car instead of transit,

which increases personal and environmental costs. They might limit their mobility, such as not taking transit if the beginning or end of that trip would be in the dark. Limited mobility limits opportunities to attend to the needs of daily life—opportunities for running errands, attending appointments, socializing with family and friends, working for income, and other benefits of living in a city.

Research on women's experiences highlights the roles of gender in perceptions of transit safety (Ceccato & Loukaitou-Sideris, 2020). Surveys that include questions about a traveler's sexuality point to mixed results as to whether sexuality influences whether and what type of harassment occurs (Ceccato & Loukaitou-Sideris, 2020; Loukaitou-Sideris et al., 2020). One study in Sweden, a country known for laws protecting gender and sexual minority equality, showed that queer transit riders feared exposure to crime while riding transit more than their cisgender heterosexual counterparts (Ceccato et al., 2024). Surveys by the National Coalition of Transgender Equality (NCTE), now known as A4TE (Association For Transgender Equality), indicate that transgender people experience greater harassment than cisgender people (Grant et al., 2011; James et al., 2016).

We still know very little about the mobility experiences, challenges, and associated harassment faced by transgender people. One of the few studies of the transit experiences of transgender people to date was a qualitative interview-based study conducted in 2015 in Portland, Oregon--which found that "mobility that is altered, shaped, and informed by a broader cultural system normalizes violence and harassment towards gender minorities" (Lubitow et al., 2017, p. 1398). To these published studies, I add my own unpublished pilot study, which I undertook in 2019. It consisted of audio-recorded, semi-structured interviews with four transgender transit riders and additional unstructured interviews over several months with one of them (as a part of a graduate interview course). I undertook the pilot study as a prelude to my dissertation research to expand my understanding of what and how I might ask transgender people about their public transit experiences.

To help fill the gap in our understanding of transgender and nonbinary mobility, I focused this dissertation on transgender and nonbinary people who take public transit (defined as bus or rail transportation services operated by a public agency) in the United States, recruiting them via word of mouth, and solicitations to participate in the study via physical posting in LGBTQ+ centers, e-newsletters, online forums, and social media. Eligible study participants had a gender identity that did not align with that which they were assigned at birth, including but not limited to transgender, nonbinary, and/or gender nonconforming.

This dissertation fills a number of research gaps. Experiences in public spaces affect people's decisions as to whether and how to use public transit (Ceccato & Loukaitou-Sideris, 2020). Published research, however, tends to treat gender as binary, collecting and analyzing data as such (Lubitow et al., 2017). This leaves a gap in the research on nonbinary people's transportation access and travel behavior(s) specifically (Lubitow et al., 2017). Furthermore, when it comes to studying harassment on public transit, using binary gender metrics blurs the factors at play (Lick & Johnson, 2018). This is because, as Lick and Johnson (2018) have argued: "gendered cues vary within sex categories, such that people can appear relatively masculine or relatively feminine compared to other members of the same sex" (p. 503). Additionally, research in social cognition has long shown that perceptions of and assumptions based on gender and age intersect with race; for example, assigning masculine attributes and an older age to Black boys/men. Such assumptions may sometimes result in action with deadly consequences, as in the death of a teenager, Trayvon Martin (age 17), at the hands of an adult, George Zimmerman (age 29), who made assumptions about belonging and aggression thinking that the teenager was a dangerous 30-something outsider (Lick & Johnson, 2018). Since multiple intersecting cues affect perceptions of gender, experiences of public spaces likely vary in nonbinary ways. Thus, this study seeks to fill the gap in our understanding of transgender mobility.

Second, and more broadly, this study contributes to our understanding of public space as a social hierarchy-regulating space, particularly with regard to gender. Our understanding of harassment and mobility shows how the harassment of cisgender women, sexual minorities, and gender minorities in public spaces stems from a cohesive social logic of white supremacy that applies to everyone. The above example from Lick & Johnson (2018) demonstrates the blurriness of dichotomous gender boundaries as existing within an overarching social logic of intersecting hierarchy that allows (even demands) enforcement action when a person is perceived as out of place. White supremacy as a social logic—more descriptively the “imperialist white supremacist capitalist cis-hetero patriarchy,” as described by queer Black feminists bell hooks and Laverne Cox (The New School, 2014)—could affect trans and nonbinary people of color, ostensibly at a more frequent and/or harsher degree, as cis people. Every time people enter public transit environments—streets, stops, stations, and vehicles—the same logic of white supremacy is applied to everyone which sorts each person into relative social positions; visibly nonconforming people stand out as exemplars. Nonchalant public existence of trans and nonbinary undermines white supremacist ideals. Thus, the experiences of trans people on public transit could inform our understanding of harassment and mobility as a part of enforcing white supremacy as a social hierarchy.

Third, this study seeks to give voice and access to policymakers of an understudied group, by showing how transgender people handle harassment—to avoid it before it occurs and deal with it during and after it occurs. The experiences of transgender transit riders can illuminate the logic behind public harassment as well as pinpoint potential policy actions to counter it. Indeed, I hope that the study’s contribution may lead to changes in transit policies, station/bus stop designs, and transit vehicle design that could increase the safety and comfort of gender minorities and cisgender women.

Lastly, this study will help the transit industry fulfill its social goals of inclusion and mobility for all, at a time that the industry faces lower ridership than pre-COVID pandemic

patronage levels (APTA, 2025). Public transit is ostensibly open to everyone, but it must be perceived as relatively safe by people of all genders for its wider adoption in the US—a necessity for transit to meet both its social equity and efficacy goals.

In addition to secondary data from the scholarly literature, I gathered primary data from survey- and interview-based descriptions of the public transit experiences of transgender and nonbinary people. To my knowledge, this study was the first US-wide study—employing surveys and interviews—that focuses on public transit and the experiences of trans and nonbinary folks. I sought answers to the following research questions:

- What are the public transit experiences of transgender and gender nonconforming people?
- How do these experiences influence/affect their use of public transit, as well as their mobility and travel more broadly?
- In what ways are these experiences influenced by other individual characteristics (e.g. age, race, appearance)?
- Which gender conformity aspects influence harassment on public transit?
- How do these experiences inform our understanding of social hierarchy enforcement in the public spaces of transit?
- What policies/strategies can help improve the transit experiences of transgender people?

This dissertation is arranged as follows. In the preceding introduction, Chapter 1, I provided the precipitating event, conceptual impetus, and knowledge context for the research. In Chapter 2, I review the literature to provide an overview of transit travel as it takes place in spatial, temporal, and social contexts. I then explain gender from a binary to a more expansive concept. I review how transit functions as a public space wherein people enforce gender through the harassment of cis women, transgender people, and nonbinary people. In Chapter 3,

I then turn to discuss the research design of my study, reiterate the research questions, explain the research methodology, and discuss the research challenges. I follow in Chapter 4 with a discussion of my empirical findings and how they relate to and further inform our understanding of transportation, public space, and gender in social hierarchy. In Chapter 5, I conclude with a discussion of measures and policies that could improve the transit experiences of transgender people.

CHAPTER 2 LITERATURE REVIEW

The current state of the literature across urban planning and its adjacent fields (e.g. geography, sociology) identifies common issues that people face when taking public transit but leaves gaps in our understanding of how the experiences of transgender people differ from those of cisgender people. This gap in understanding highlights the marginalization and systemic neglect of gender minorities in urban planning and transportation fields. In this section, I first give an overview of the literature concerning travel and mobility that explains why people travel, the sociodemographic characteristics that may influence travel, and some particular concerns relating to transit travel. Then, I discuss literature concerning gender to explain binary and expansive views of the concept of gender, as well as the associated social and urban planning implications. Particularly, Black feminist studies and disability studies add to our understanding of how white supremacy affects the social performance and achievement of gender. Finally, by bringing transit and gender research together, I discuss literature that highlights the ways in which gender is enforced in the public realms of transit.

Travel and Mobility

Travel demand

Demand for transportation comes (derives) from people needing to do a variety of things (demand) with limited time and other resources to do so; thus most of the travel behavior literature considers demand for transportation a derived demand (Cervero & Kockelman, 1997; Handy & Niemeier, 1997). Such derived demand takes place within temporal, spatial, and social contexts, meaning that travel happens in the physical space of the built environment and in the social space of cultural expectations (Hanson, 2010; Kwan, 2000). There are only so many hours in a day in which to accomplish tasks and their associated travel (Schwanen et al., 2008).

The distance and duration of travel depends largely on the spatial distribution of destinations which can vary across areas with different urban forms and available travel modes (Cervero & Kockelman, 1997; Handy & Niemeier, 1997); thus, the placement of homes and services and the ways in which road, transit, and sidewalk networks connect to them differently affects whether and how long people travel (Cervero & Kockelman, 1997; Loukaitou-Sideris, 2016).

Contextual characteristics influence people's travel decisions; these include the built environment characteristics of the spaces surrounding them, as well as individual characteristics such as gender, life stage, past experiences, class, and (dis)ability characteristics. Gender can have significant influence on people's mobility and affects the demand for travel (Madariaga & Neuman, 2020). This is because gender assignment comes with assigned roles and expected associated duties (Collins, 2002). Gender roles influence peoples' activities, as well as how and when they undertake them (Crane & Takahashi, 2009; Hanson, 2010; Kwan, 2000; Law, 1999; Loukaitou-Sideris, 2016; MacDonald, 1999; Madariaga & Neuman, 2020; Rosenbloom, 2006). The gendered aspects of mobility and use of space has been flagged as a necessary topic of study since at least the late 1970's (Rosenbloom, 1978). For example, changing social expectations about paid work outside the home led to research assessing how gender interacts with transportation behaviors to identify and explain the commute differences between men and women in time and space (Kwan, 2000; MacDonald, 1999); indeed, that was a major research focus for well over a decade, even from theorists outside transportation planning (Law, 1999). Urban planning scholar Heather MacDonald reviewed the literature (primarily published in the 1990s) that attempted to identify and explain the commute distances and patterns of women in the U.S., looking at hypotheses related to childcare responsibilities, geographic ubiquity of low-paid part-time jobs dominated by women, and the commute time-wages tradeoff (MacDonald, 1999). During the same time, geography scholar, Mei Po Kwan's analysis found that women's non-commute trips, especially those for domestic responsibilities—chauffeuring children, shopping goods and groceries for the home—happen within greater time and space constraints

compared to those of men's; she also found that higher space-time fixity correlated with women taking part-time paid work (Kwan, 2000). Also in the late 1990s, another geography scholar, Robin Law, acknowledged the importance of the quantitative work (such as Kwan's and studies reviewed by MacDonald) to verifying that women's travel patterns indeed confirmed women's needs to accomplish different things than men—mostly unpaid care work related to household roles. Law suggested considering the cultural forces at work that shape the mobility described by the quantitative work (Law, 1999).

Over the following decade, transportation researchers continued to study gendered travel patterns, particularly the commuting trip (Crane & Takahashi, 2009; Rosenbloom, 2006). When the attention given to the full breadth of and co-constructed nature of gender and mobility in the lives of women picked up once again in urban and transportation planning, it integrated more of the social aspects of gender that influence how and why women travel differently than men—such as lesser access to private vehicles and greater harassment avoidance (Loukaitou-Sideris, 2016). These newer studies found that gender correlates to the likelihood of experiencing harassment in public spaces; specifically, women experience more sexual harassment in transit environments than men. As a result, women are made to feel unsafe on and change their use of public transit due to verbal, visual, and physical harassment to a greater extent than men (Ceccato & Loukaitou-Sideris, 2020; Loukaitou-Sideris, 2016). That women experience more harassment in public transit spaces may also imply that any variation from a certain idea of manhood or binary gender norms could also affect what riders nonconforming to such gender norms experience on public transit.

Additionally, gender influences the social expectations of behavior and expression (West & Zimmerman, 1987). Personality traits, physical embodiment, and actions end up assigned as more appropriate to either men or women in a binary understanding of gender—such as men being viewed as assertive, big, and taking up physical space, while women are expected to be humble, small, and unintrusive. To properly “perform gender” therefore requires adhering to—

and staying abreast of changes in—what is considered appropriate for one’s gender in the context of interactions with others in space and/or time (West & Zimmerman, 1987). Clearly, not all men are particularly assertive in every context nor are they all big relative to each other or more prone to spreading out across multiple seats to claim space. In the same vein, not all women keep their accomplishments to themselves, wear a shorter inseam, or stand in the background relative to one another or men.

Variance, however, from gendered social expectations carries significant personal and mobility costs, such as women’s increased risk of harassment and assault when out in public at night (Madariaga & Neuman, 2020). In this example, a proper woman would not be out in public at night, particularly alone, therefore she bears the burden of increased harassment and assault for stepping out of the gendered norm. Even if her gender identity or physical expression perfectly align with expectations, her behavior does not. Additionally, gender plays a role in travel behavior in contexts where social roles assign women the brunt of home- and family-care related labor with little regard as to whether they work as paid laborers outside the home (Clark et al., 2003; Geng et al., 2017; Madariaga & Neuman, 2020; Voulgaris et al., 2017). This comes to bear in the data that shows that women’s commutes continue to differ from men’s, particularly in how many trips they take and in trip-chaining (Kwan, 1999). Classic examples include dropping children off at school on the way to employment that is closer to home, picking up family prescriptions on a lunch break, scheduling medical appointments to link up with a short workday commute, and picking up groceries on the last leg of the trip home. It is mostly women who are expected to do all of such activities, whether they have access to a private vehicle or experience decreased safety after dark. Ostensibly, transgender and nonbinary people need to accomplish many of the same tasks as in any household, so factors that are known to affect women’s travel, such as reduced access to private vehicles, on average, and increased harassment, might also result in mobility restrictions for gender diverse people.

Characteristics other than gender affect travel needs, including life stage, mode familiarity, and income. Depending on their life stage, people have different activities they need to do and different mobility needs associated with these activities (Bhat et al., 2009; Blumenberg et al., 2012; Geng et al., 2017; Voulgaris et al., 2017). For instance, a retiree might not commute to work at all, while a teenager travels every weekday morning and afternoon to school. People in smaller and younger households tend to consider non-work travel, such as entertainment or childcare locations, when choosing new homes (Chatman, 2009). In addition to life stage and age, people's familiarity and comfort with particular modes of travel matters. For example, people who rode transit as young adults are more likely to consider transit as a travel option (and their behavior reflects it) later in life (Smart & Klein, 2018). Income also makes a difference as people get things done outside of home and work within their financial and time budget constraints (Clifton, 2017; Voulgaris et al., 2017). Such is the case for low-income households who live in urban cores where they can avoid the cost of owning a car by using relatively better transit service (Glaeser et al., 2008). Paradoxically, other than people in impoverished families, the probability of living near frequent transit service increases with income even as the likelihood of car ownership also increases (Kramer, 2018). In short, people choose where, whether, when, and how to travel based on what it is they need to accomplish within the confines of and relative to their context of their individual characteristics and resources, as well as their spatial and social positions.

Transit travel characteristics

People who travel by public transit take trips composed of distinct elements compared to those traveling by private automobile. Whereas a person who travels by car first walks¹ to the

¹ For this discussion, "walk" means getting from one point to another which could be walking or wheeling in some fashion (by bike, scooter, wheelchair, skateboard, etc.).

car, rides in the car, and then walks from where the car parks or drops them off to their destination, a person who travels by public transit walks to the transit stop (or station), waits for the transit vehicle, rides the transit vehicle, disembarks at another transit stop, and then walks to their destination. A transit transfer adds another waiting and riding period. The car traveler spends relatively little travel time exposed to public interaction outside of the cocoon of the private vehicle. In contrast, the transit traveler spends all of the travel time exposed to public interaction with no cocoon whatsoever, including within the transit vehicle itself. Street, stops and stations, and vehicle designs, policies, and practices, all affect who feels safe and comfortable during travel (Ding et al., 2020). Thus, the publicness of transit travel makes it quite different from private automobile travel and poses higher risks of harassment for a traveler.

The time dimensions of transit also make the public transit mode different compared to private automobile travel, especially in the US. The street networks of US cities are almost entirely dedicated to and prioritize fast car travel (Nelson, 2017). Travel by transit covers a rather limited geography, generally takes longer than travel by a private vehicle, and takes place within a more constricted timeframe during a day (coinciding with the hours of operation of the transit service), when compared to car travel (Walker, 2012). How much time a traveler spends in public depends on the frequency of transit service and the service network policies and design (Walker, 2012). The time spent in each of the trip segments mentioned above—the walk to the stop, the wait, the ride, and the walk to the destination—changes depending on the transit service's route (which sometimes varies between day, late evening, and night), its span (how many hours of the day the route runs), service frequency (which may change throughout the day), and travel speed (which may also change throughout the day, depending on the traffic). A transit transfer takes even longer depending on service frequency and/or network timing, thus increasing travelers' exposure to the public realm and the possibilities for harassment.

Gender

Binary views

Binary gender—a mutually-exclusive dichotomy of men and women—stood as a well-established norm in the US long before the creation of the field of urban planning, and this dichotomy largely continues today (Doan, 2010; Kern, 2020; Lubitow et al., 2017; Spain, 2014a). Gender as a determinative binary sets up several concepts: one, spaces are planned with distinct gendered social norms built in; two, universal norms of use and binary gender expectations thus get built into spaces; and three, gender expectations get reflected in what is considered appropriate use of spaces.

Urban planners operate within the contexts of their cultures' social norms, including gender. In the U.S., as Doan pointed out, “expectations for appropriately gendered behavior in western society” permeate every aspect of life (2010, p. 365). Thus, gender expectations permeate urban planning as well. Using the examples of public bathrooms and public transit respectively, Doan and Lubitow provide examples of how people police one another's presence in these spaces based on gendered expectations; importantly, when it comes to the bifurcation of the uses of space, each author also speaks to how gendered expectations are planned into spaces (Doan, 2010; Lubitow et al., 2017). In the bathroom example, public spaces and buildings are constructed with men's restrooms and women's restrooms. In the public transit example, transportation spaces are planned to “respond most effectively to the needs of a commuting population” of a particular type, namely “an able-bodied worker who takes a direct route from home to work and back again”—the idealized commuting pattern of white men in particular (Lubitow et al., 2017, p. 925). As Lubitow and Spain explain in their article and book, respectively, western urban space was built for an imagined universal user, an able-bodied middle-to-upper class white man (Kern, 2020; Spain, 2014a). For example, the U.S. built a massive highway network to support the post-WWII exodus of white families into new suburbs,

wherein the man of the house would commute via a private automobile to paid work and the woman would stay at home to undertake unpaid, domestic work (Spain, 2014b). When it comes to public transit, transit agency policies often require riders to remove their children from and collapse strollers, which makes an outsized impact on women's mobility choices given the continued social expectations that women are the primary childcare givers (Kern, 2020). Thus, spaces are planned, built, and controlled based on gendered expectations of who will use what spaces and in what ways.

To take a step back from planning urban space itself, as already stated, gender expectations have been constructed historically around a binary norm in the U.S. (West & Zimmerman, 1987). Binary gender requires at least a two-part explanation—one for binary and one for gender. Binaries, by their very definition, sort a whole group into two mutually exclusive subgroups (*Binary*, 2021). There are no leftovers in a binary. There are no overlaps between the subgroups in a binary. To be a part of one subgroup is to not be a part of the other subgroup. Binaries might be named with other words such as 0 or 1, man or woman, yet binaries are defined as “the thing” or “not-the-thing.” Defining and bounding the edges of thing and not-the-thing assigns meaning to the subgroups within the whole. The importance of the binary as influencing inclusion and exclusion when it comes to gender and public space will be discussed in detail later. This is to simply set out a definition of binary.

Gender, unlike binary as a concept, has a more contested definition (Spain, 2014a; West & Zimmerman, 1987, 2009). Biological determinism grounds gender as an essential characteristic dependent on factors such as physiology, genetics, and hormones; with western societies divvying people up into a binary gender where “men are men and women are women” (West & Zimmerman, 1987, p. 128). From the outset, Fausto-Sterling illuminates the false binary put upon biological sex in reviewing the history of social, legal, and medical practices toward intersex people (individuals presenting “ambiguous” sex characteristics) (Fausto-Sterling, 2020). Social constructivism views gender as something that people do and display, as

in roles and behaviors that people are socialized into (West & Zimmerman, 1987). The way this has played out in the US has generally meant that, based on physical characteristics at (or before) birth, children are assigned a sex which most parents and society then use to ascribe gender and socialize and train their children to the expected gender expression and social roles (West & Zimmerman, 1987, 2009). Under this set up, expected gender expression includes bodily characteristics (e.g. shoulder-waist-hip ratios, mannerisms), adornment (e.g., clothing, jewelry), and attraction (e.g., sexual, romantic) (Fausto-Sterling, 2020; West & Zimmerman, 1987). Thus, sex, gender, and sexuality binaries are paired together—babies assigned as male at birth grow up into men, who look a certain way and are expected to be attracted to women, while babies assigned female at birth grow up into women who look a certain way and express attraction to men (Fausto-Sterling, 2020). Moreover, the physical characteristics used to assign sex do not have meaning on their own any more than brown or blue eyes have social meaning on their own. Thus, gender arises from assigning meaning. Society creates and maintains meaning for gender (Bondi & Rose, 2003; Collins, 2002; Fausto-Sterling, 2020; West & Zimmerman, 1987, 2009). West and Zimmerman explain that the creation and maintenance of what gender means and how people enact/achieve gender is an ongoing and shifting social process (1987, 2009). For a classic (albeit problematic) example, men go to work to provide for a family, and women stay home to take care of a family (Hayden, 1980; Hu, 2023). This clearly has not been true throughout the ages of western societies as women of color and low-income white women have often worked for pay outside of the home (Collins, 2002). The reality of who works inside and outside of their own homes has changed in the last century and throughout the urbanization and suburbanization of the U.S. (Bondi & Rose, 2003). In the US in 1900, for example, “26% of married Black women were employed, compared to only 3.2% of White women” (Glenn, 1991, p. 1337). By 2021, 57% of all married women participated in the labor force (Bureau of Labor Statistics, 2023). But even though the exact meanings and expectations

have shifted throughout history, gender remains a longstanding framework built into the social and urban fabric of society.

Gender acts as one of the main frameworks of society by making meaning and order (Collins, 2002). Gendered social roles and expectations determine most aspects during all of life from what people ought to wear (Collins, 2002; Doan, 2010) to what they ought to do (Collins, 2002; West & Zimmerman, 1987) to where they ought to go (or not go) (Beebeejaun, 2017; Collins, 2002; Doan, 2010; Hayden, 1980). Adherence or deviation from these norms result in rewards or punishments respectively across all facets of life (Beebeejaun, 2017; Collins, 2002; Doan, 2007, 2010; West & Zimmerman, 2009). This bears relevance for urban planning in that gender acts as an organizing principle for all aspects of human life, including urban spaces.

Intersectionality

Gendered expectations shift depending on where a person (or group of people) sits within the many facets of social hierarchies (Beebeejaun, 2017; Collective, 2014; Collins, 2002; Crenshaw, 1991; Lakshmi Piepzna-Samarasinha, 2018; Loukaitou-Sideris, 2016). Instead of being a single determining factor in social expectations, gender acts as one, albeit incredibly influential, component among other components of socially-constructed organizing principles. For example, in the hierarchical arrangement of the binary dichotomy of men and women, men are meant to dominate over women, and women to acquiesce to men (West & Zimmerman, 1987). Yet, the social history of the US includes a racial hierarchy of white people and Black people where white people are put above Black people (Collins, 2002; Crenshaw, 1991; Lakshmi Piepzna-Samarasinha, 2018). Manhood is limited to white men, who must assert their dominance over others or else are seen as not fully men. Thus, situations happen where the socially constructed positions put Black men to acquiesce to white women—an arrangement that violates the imposed hierarchy of men versus women to shore up the imposed hierarchy of white supremacy (Collins, 2002). Again, wherein white supremacy acts as a social logic named

in more detail by bell hooks as, the “imperialist white supremacist capitalist cis-hetero patriarchy,” (The New School, 2014).

A binary concept of gender, therefore, lacks the nuances of lived social realities. The theory of intersectionality developed by the Combahee River Collective and decisively put forth by Kimberlé Crenshaw complicates the false narrative of a simple binary of gender—as the roles and activities deemed socially appropriate vary for every person depending on where a person exists within matrices of power—at intersections of characteristics such as gender, race, class, and ability (Collective, 2014; Collins, 2002; Crenshaw, 1991; Lakshmi Piepzna-Samarasinha, 2018). Black feminists explain the interwoven hierarchies that demand and deny the achievement of gender expectations of white people by people of color (Collins, 2002). To return to an example of situations faced by Black men, they are supposed to have freedom of movement through all spaces, public and private, yet society often denies this achievement of manhood to Black men via harassment, assault, racial profiling, and even imprisonment by police (Collins, 2002). This emphasizes the white part of white supremacy. Age folds into gender as well, as girls are treated as future women, and older white women are treated as no longer fully women (Chrisler, 2023). Across the age spectrum, women are expected to take care of household needs such as household scheduling, childcare, eldercare, food inventories, cooking, and cleaning, while men are expected to provide the primary funding for household activities via paid employment (Collective, 2014; Collins, 2002; Rosenbloom, 2006). This emphasizes the hetero [sexual] (paired men and women households), capitalist (balance of unpaid care labor and paid labor to survive), and patriarchy (men over women due to paid labor) parts of white supremacy. Historically, however, Black women in working class and poor households have provided the needed dependable household income for their families through low-wage work outside of their homes as white employers denied Black men stable employment (Collins, 2002). These working women, especially Black women, who achieved financial success that moved their families up out of the working class into the middle class, thus broke

gender norms (Collins, 2002). Further, as pointed out by queer disabled feminists, neurodiverse people might not be able to generate the outputs expected of them based on gender, such as consistent productivity, no matter the state of their physical wellbeing, financial stability, and/or anxiety levels (Feinberg, 2010; Lakshmi Piepzna-Samarasinha, 2018). This emphasizes the imperialist and capitalist part of white supremacy. An upper class able-bodied Black woman's expectations, experiences, and expressions of womanhood are clearly not the same as those of a working class disabled white woman's (Lakshmi Piepzna-Samarasinha, 2018). Already, then, gender is not a binary of simply men and women.

In urban planning and other fields, calls have appeared for understanding gender as a category itself beyond the binary distinction (Doan, 2007; Lubitow et al., 2017). Doan highlights ways in which the perceptions and experiences of public spaces by transgender people reveal forms and levels of violence (from denying them entrance at events to physical assaults) used in attempts to enforce gender expression (2007). She also shares specific examples of verbal harassment meant to control gender expression in public spaces such as bathrooms and airports (2010). Lubitow details experiences of transgender people taking public transit and experiencing varying levels of service, harassment, and assault relative to their gender, race, and class presentations (Lubitow et al., 2017). Yet for the majority of research studies, such an understanding of the expansiveness of gender has yet to break through binaries, whether binaries of gender as men/women or those of space as public/private (Beebejaun, 2017; Bondi & Rose, 2003; Doan, 2007). This emphasizes the cis[gender] part of white supremacy.

Gender enforcement in public spaces, transportation, and transit

Public space enforcement of binary gender

The prescriptive pairing of gender and urban space, with men considered as deserving unbridled access to public space, while women expected to stay in private/domestic spaces,

has historically led to the enforcement of the previously mentioned false paired binaries through design, policy, and social behavior. From its early days, urban planning was steeped in explicit gender norms, which were reflected in land use and transportation planning laws and practices (Spain, 2014a). For instance, early studies concerned about cultural decay within cities looked at the “delinquency triangle” formed by the geographic mobility of women within cities to meet men at other locations within the city exposing women to “sex delinquency” (Burgess, 1915, pp. 152–153). Who is violent and who fears violence, in all of violence’s multiple forms, demonstrates control and reinforcement against those who would contest social hierarchies (Collins, 2002; Lakshmi Piepzna-Samarasinha, 2018). The violence and fear of violence that women experience when they move through public spaces exposes the imposed norms of the paired binaries of men/women and public/private domains (Loukaitou-Sideris, 2014). Yet, expressions of gender vary greatly across and within intersections of race, class, and ability.

People are assigned and socialized into gender roles, including how a person of a given gender ought to express their gender, and where this gendered person ought to be in physical and social spaces. This points to the imperialist and cis[gender] aspects of white supremacy. Additionally, people experience social repercussions when their gender expressions vary too much from the assigned norm in the spaces they inhabit (Doan, 2010; Johnson et al., 2015; Lick et al., 2013). Most often in public spaces, this begins with physical expressions. Within moments of seeing another person, people assess their gender based on visual cues, everything from body composition to clothing to the way in which they walk (Lick et al., 2013). Repercussions vary widely, from mild harassment to job loss and physical assault, particularly for people perceived to be gender atypical women (Lick & Johnson, 2014). For instance, transgender scholar Petra Doan (2010) shares examples of her experiences of microaggressions and flat-out harassment because her gender expression does not align with social expectations of women. Her experiences happened in public transit environments, elevators, the quasi-public spaces of workplaces and classrooms, the “special circumstance” of public restrooms, the semi-

private spaces of retail shopping malls, and the private space of homes. Prior to her autoethnographic research article, Doan (2007) had published research that included more examples from other transgender people who had experienced forms of social policing of gender, explaining how the quality and quantity of that policing may shift in different social and spatial contexts.

Thus, public spaces have been gendered in ways that do not match some people's lived realities (Doan, 2007, 2010). Earlier qualitative research on the public transit experiences of transgender and gender nonconforming individuals also points to violence and the fear of violence as the price they have to pay, while moving through the city on transit, because they challenge social norms (Lubitow et al., 2017).

Transportation and transit enforcement of binary gender

Some transportation research examines gender enforcement through violence and expectations of violence (Ceccato & Loukaitou-Sideris, 2020; Ding et al., 2020). Women (and other genders) perceive and experience travel-related safety threats differently than men, so much so that they plan their trips differently (Hsu et al., 2019; Law, 1999; Loukaitou-Sideris, 2016; Lubitow et al., 2017). Women adjust their travel according to their personal risk assessments, seeking to stay as safe as possible while accomplishing all that they need to do. Women who drive consider when to travel where, including where to park, and the walk between their parked car and their destination, based on their (assault) risk assessments (Loukaitou-Sideris & Fink, 2009; Lubitow et al., 2017). Similarly, women who use transit consider the safety of the bus stops and bus routes, and often take precautions (walking to a different bus stop, travel with company, avoiding travelling at night, carrying some form of weapon, etc.) so as to feel more safe (Loukaitou-Sideris, 2009).

Transit research literature demonstrates that women experience more and different types of harassment than men on transit (Ding et al., 2020). Findings from prior transportation

studies on the extent of harassment on transit ranged quite broadly relative to the findings of a 2018 US national study of sexual harassment, which specified various locations where harassment takes place including transit spaces (Kearl, 2018). In this national study, 8% of (cis) men and 26% of (cis) women had experienced harassment in public transit spaces (Kearl, 2018). In a literature review of sexual harassment in transit environments, Ding et al. (2020) review a number of transportation studies, among them: A New York City (subway) survey by Stringer (2007) found that 63% of all riders had experienced harassment, and 93% of them were female (Ding et al., 2020). A 2018 study by LA Metro, the Los Angeles Metropolitan Transportation Authority that runs most of the public transit in the county, found that 26% of women riders and 21% men riders had experienced harassment over the past 6 months on the bus or on the train (Ding et al., 2020). Another 2018 rider survey by the Washington DC Metro transit system found that 21% of train riders had experienced harassment, and women were twice as likely than men to be harassed (in Ding et al., 2020). Differences between the national study on harassment and the other studies may be because the national study asked about sexual harassment, while the other studies varied as to whether they asked about sexual harassment or any type of harassment. Furthermore, the methodology of the studies varied in whether they asked simply about harassment or broke down harassment into specific behaviors, and then asked specific questions about them. Additionally, different studies asked riders to respond if they had been harassed over specific timeframes. Prior research shows that asking about specific behaviors that qualify as harassment results in higher reports of harassment compared to using “harassment” as a catch all word. Indeed, all of the interviewees in this dissertation research described harassment when asked broadly about negative experiences with transit, even though some of those interviewees had indicated not being harassed in their survey replies.

Studies find that harassment affects women’s travel behavior. For example, out of concern for their security, more women than men who ride the Los Angeles Metro Expo Line

(which runs between downtown Los Angeles and Santa Monica on the Pacific Ocean to the west) report avoiding taking the train, waiting at stations, and walking to or from stations outside of daylight hours (Hsu et al., 2019). Many women who have access to a car avoid transit altogether to reduce the risk of experiencing harassment and/or physical violence in public, up to and including forms of gender-based and/or sexual violence (Loukaitou-Sideris & Fink, 2009). So, we can see how social norms dictate who may move through public spaces at what times of day, free of the expectation of harassment or assault, and how gender roles create a complex matrix of space and time far beyond the simple paired dichotomies of men/women and public/private (Connell & Messerschmidt, 2005; Day, 2001; Loukaitou-Sideris, 2014).

Looking beyond the gender binary and heterosexuality, a greater proportion of gender nonconforming and transgender people experience harassment on transit than cisgender people (Grant et al., 2011; James et al., 2016). The influence of perceived sexual versus gender nonconformity remain unclear. As mentioned in the introduction, while sexuality outside of heterosexuality can correlate with public harassment (Alt et al., 2020; Lick & Johnson, 2014), it does not necessarily translate to gendered transit harassment (Ceccato & Loukaitou-Sideris, 2020; Ding et al., 2020). A study of transit users in New Jersey showed straight cis men as the least likely to have experienced harassment on NJ Transit (7.9%), followed by straight cis women (10.9%), queer cis men (14.1%), queer cis women (20.1%), and queer trans/gender nonconforming riders (21%) (Younes et al., 2026). Whether nonconformance is visible or not could affect the risk of harassment (Lick et al., 2013; Lick & Johnson, 2018). For example, with the danger of anti-blackness and transphobia in US public spaces, Black (visibly) trans women exist in a particular intersection of social oppression where they face increased harassment and violence while taking public transit (Collins, 2002; Lubitow et al., 2017). The outcomes of prior research looking at the transit experiences of people who are transgender make sense given research into how perceptions of other people affect the way one behaves toward these people (Alt et al., 2019, 2020; Johnson et al., 2015).

Given the foregoing, this study builds on this literature to expand and deepen our understanding of public transit harassment and gender, specifically looking at the transit experiences of transgender and nonbinary individuals. In what follows, I discuss the study's research questions and research design.

CHAPTER 3 RESEARCH QUESTIONS AND RESEARCH DESIGN

As stated, the aim of this study is to cast light at the harassment and other experiences during the transit trip of a largely underrepresented group of transit riders: transgender and binary people. It expands on prior research by covering a larger geography (the entire US) and employing a mixed-methods approach of surveys and interviews. Through this study, I brought in trans and nonbinary voices as I sought to answer to the following research questions:

- What are the public transit experiences of transgender and nonbinary people?
- How do these experiences influence and affect their use of public transit, as well as their mobility and travel more broadly?
- In what ways are these experiences influenced by other individual intersectional characteristics (e.g. age, race, appearance)?
- Which gender conformity aspects influence harassment on public transit?
- How do these experiences inform our understanding of social hierarchy enforcement in the public spaces of transit?
- What policies/strategies can help improve the transit experiences of transgender and nonbinary people?

Research hypotheses

In plain language, my hypotheses would be stated in terms of expecting a difference based on queer Black feminist theory of white supremacy—such as a trans person in a transit environment in the U.S. is more likely to experience harassment than a cis person. Yet, the statistical tests employed for this study are predicated on null hypotheses, assumptions of no difference (of sameness) that can be shown to be false. So, I have written the null hypotheses for statistical tests below even though the plain language hypotheses based on the reviewed

transportation theory, gender theory, and transportation research point toward a plain language educated guess of trans and nonbinary people experiencing transit differently in the US than cis people. The study will test the following hypotheses:

Null Hypothesis 1

A person who identifies as transgender and/or nonbinary (independent variable) is as likely to experience harassment on transit (dependent variable) as a cisgender man or cisgender woman.

Null Hypothesis 2

A transgender person who does not identify as non-Hispanic white (independent variable) is as likely to experience harassment (dependent variable) on transit as a non-Hispanic white cisgender person.

Null Hypothesis 3

A person who identifies solely as binary transgender (independent variable) is as likely to experience harassment (dependent variable) as a person who identifies as nonbinary.

Research Methods

To examine the above research questions and test the aforementioned hypotheses, I conducted a mixed methods study using an online survey and semi-structured interviews with adults (age 18+ years) who met the following eligibility criteria: 1) identify as transgender and/or nonbinary; and 2) ride (or have ridden) public transit at least once per week on average in the US. Prior to starting data collection, the research methods were reviewed and approved by the University of California Los Angeles's Office of the Human Research Protection Program (OHRPP), also known as UCLA's institutional review board (IRB), see UCLA IRB#22-001499.

Participants

I chose as study participants transgender adults, assuming that adults who are transgender or nonbinary are more likely to have given their gender expression and other people's reactions to their gender expression more thought than children or cisgender adults. Since this study focused on transit experiences, it necessarily needed to be of people who were familiar with transit. Accordingly, I also assumed that people who take public transit at least once per week, on average, as adults have a greater likelihood of understanding the transit cultures of their respective metropolitan areas than people who do not take transit. Additionally, I assumed that occasional transit riders are likely to focus more on figuring out the process of riding transit—boarding, paying, where to sit, how to indicate wanting a stop, navigating getting off the vehicle, and other wayfinding challenges that consume attention for non-routine efforts—than experienced transit riders. To address the broadest array of transgender experiences of taking public transit, I purposefully sought out a range of people from different urban typologies (areas clustered by built environment characteristics, such as building and street densities, and use characteristics, such as commercial, residential, and short- or long-term tenancy densities) arrangement and demographics relating to age, race/ethnicity, and gender expression.

My goal was to garner completed surveys from 385² eligible participants. I was able to get close to that number, recruiting 353 survey respondents, despite the fact that this was a

² If this were a truly random sample study, the minimum number of participants for calculating statistical significance, using Cochran's Formula $n = \frac{Z^2 p(1-p)}{e^2}$ (Southampton, 2024) with a confidence interval of 95% and margin of error of 5%—where n is the minimum sample size, Z is the Z-score (directionality of and how many standard deviations a data point is away from the mean of a distribution), p is the estimated ratio of the population having the desired attribute, and e is the margin of error—would be 385 ($= ((1.96^2) * 0.5 * (1-0.5)) / (0.05^2)$)—to reduce the possibility of a Type I error (false positive). For effect size, using Cohen's take on sample sizes for an adequate power analysis of 0.8 (Serdar et al., 2021); thus, a medium effect size (0.2 to 0.5) would require 125 participants ($= ((2.96 + 0.84)^2 / (0.5^2))$), and a small effect size (0.2 or less) would require a sample size of 4,900 ($= ((2.96 + 0.84)^2 / (0.2^2))$)—to reduce the possibility of a Type II error (false negative). Analysis of subsets within the sample would require an even larger sample size.

difficult to reach population. My total sample was not a random sample; rather recruitment relied on social connections and the snowball method.

Participant Recruitment

Random recruitment of transgender adults who take or had taken transit regularly in the US was not feasible; therefore, the results of this study are not generalizable in a statistical sense. They are informative toward understanding the experiences and how those experiences do or do not align with queer Black feminist theories. To find participants for this hard-to-reach population, I relied on snowball recruitment—asking that people share the survey with others who were or knew trans and/or nonbinary transit riders. I recruited with a link to the survey via online social media (Facebook, Instagram, Reddit, and the app formerly known as Twitter), university LGBTQ+ resource center communications, the city and/or regional LGBTQ+ resource center communications within the service of the top 35 urbanized areas with the most transit travel (by unlinked passenger trips), and word-of-mouth queer networks. Survey participants could opt-in to be further interviewed by responding positively to a question at the end of the survey. This recruitment biased the sample toward trans people who are connected with queer communities in some form, even if only via a newsletter.

I recruited study participants from within the United States and its territories. I chose the US context because I am most familiar with it; my urban planning training is US-centric, and gender equality is a legally-protected category for public services in the US. Gathering data from people across the United States increased the potential participant pool so that it might be possible to gain enough survey responses for statistical analysis, nationally if not regionally, and enough interview data to reach data saturation, wherein no new information would arise from additional interviews and asking more people the same questions would give me the same answers as the people I had already interviewed (Saunders et al., 2018). Initially, I expected to conduct about 30 in-depth interviews, given the wide range of experiences possible for people

of different ages, races/ethnicities, and gender expressions. The final number of interviews (22) was ultimately determined by information saturation, as data collected from the latter interviews approached and crossed into redundancy.

I used field notes and memos throughout the research process to document my shifting and growing understanding and thinking about various concepts.

Researcher

Given my approach to this study from a queer Black feminist lens, I acknowledge that my positionality matters in conceptualizing, executing, analyzing, and writing up this study. I may have not thought to study this topic had I not experienced verbal harassment on a transit trip on my way to a major researcher-practitioner conference.

I am a genderqueer white, middle-aged, medium-height (5'10"), heavy set (large to extra-large US men's clothing), trans masculine, neurodivergent, mostly able-bodied, US-born, multi-regionally-raised, public school educated (kindergarten through graduate school) dyke from a low-income family of origin. My low-income family status meant greater pressure on me to conform to white girlhood standards as I progressed through public school as a way to maximize the possibilities of securing a better household income by both gaining a college education (through merit scholarships) and marrying a college educated man. My neurodivergence and growing up in multiple regions of the US raised my awareness of variances in social norms and associated hierarchies in public spaces. My whiteness, masculinity, and able large body often provide me a level of comfort to move about the world read by others as a white man. When read as a man, I am plain, mundane, forgettable. That masculinity, however, transgresses social norms as I was assigned female at birth, raised as a girl, and raised to be a heterosexual woman. When people notice that I am not a man and am not expressing myself in ways they understand as a woman, that nonconforming masculinity gets ascribed to my nonconforming sexuality as a queer or a dyke or a lesbian. When I am read

as trans masculine and/or a butch dyke, I get harassed about my body size, gender, and sexuality. Though I am a white US-born citizen, I receive extra scrutiny whenever I travel in the US via a mode that requires showing picture ID. Which is all to say that I was already aware of some of the ways in which social enforcement of white supremacist norms take place in public spaces.

My identities as and involvement with queer gender and sexuality communities meant that I started this research having greater knowledge about my topic than the average lay person. My training as an urban planner and transportation researcher also meant that I started with greater-than-average transit knowledge. Together, those bodies of knowledge along with my social networks affected who I reached and who felt comfortable sharing their experiences with me via the survey and interviews of my study.

Online survey

Using a survey instrument gave me the opportunity to collect more data on transgender experiences of public transit in the US to help fill that knowledge gap. Given the mixed evidence on the correlation between sexuality and harassment on public transit, it may be that external gender nonconformance increases harassment more than internal gender identity. The online survey (see appendix D)—completed by 353 respondents between November 2022 through March 2023—consisted of 30 questions, which included two open-ended questions about harassment experiences, two open-ended questions about gender expression, one open-ended question about improving transit experiences, one open-ended question about location, and 24 closed-ended questions about the participant's sexuality, gender, gender expression conformance, age, and race/ethnicity to provide data to test my hypotheses. Participants could elect to provide answers for multiple locations, but had to do so for one location at a time for all location-dependent questions. For the closed-ended questions, participants could use restricted response options and Likert-scale answers. The open-ended questions of the survey were

meant for participants to 1) provide context and explanatory details to close-ended questions; 2) discuss other variables participants considered important to their public transit experiences that had not been mentioned or measured in the closed-ended questions, and 3) point to possible desirable interventions to reduce harassment. Delivering the survey online allowed for a greater potential pool of participants, particularly for reaching a diversity of ages and race/ethnic identities. Participants received no monetary compensation.

To gather and analyze the data from the 353 surveys received, I used Qualtrics as the survey platform and Microsoft Excel to analyze the data. Qualitative analysis of open-ended questions consisted of four stages: anticipated coding, initial coding for concepts, focused coding after no new concepts arose in the initial coding to aggregate, and axial coding to identify relationships between coded concepts (Bengtsson, 2016). Anticipated codes arose from the literature review and my longstanding involvement with queer and transit communities (Table 1). The anticipated themes for the surveys and interviews were: good experiences with transit; harassment experiences by perceived reason; harassment experiences by type; people in transit spaces about whom respondents might comment; the built environment quality of transit spaces; the importance of times of day or particular settings for the experience of transit spaces; transit service issues; respondent risk mitigation actions and safety behaviors; gender identity stated as relevant to the transit experience; and (greatly simplified) stages of social gender transition mentioned by respondents as relevant to their experiences.

Table 1. Anticipated codes.

Good-Experiences-no service mishaps	Built-Environment-Care-lighting
Good-Experiences-no harassment	Built-Environment-Care-cleanliness
Good-Experiences-positive riders	Built-Environment-Care-seating
Good-Experiences-positive drivers	Space-Time-night or dark
Good-Experiences-positive other staff	Space-Time-commute or peak or busy
Harassment-focus-trans/nb/GNC	Space-Time-off peak or not busy
Harassment-focus-queer (LGBQ+ not T)	Space-Time-area or neighborhood
Harassment-focus-gendered but not GNC	Space-Time-route
Harassment-focus-race	Space-Time-station or stop
Harassment-focus-income	Service-area
Harassment-focus-disability	Service-frequency or headways
Harassment-type-sexual	Service-span
Harassment-type-non-sexual	Service-reliability
Harassment-type-visual	Service-network or transfers
Harassment-type-sound not words	Safety-Behaviors-alone or not
Harassment-type-spoken words	Safety-Behaviors-defense item
Harassment-type-physical	Safety-Behaviors-plans shared
Harassment-type-stalking	Safety-Behaviors-awareness
Harassment-type-rape	Gender-identity
People-crowds or crowded	Gender-expression
People-intoxicated drunk or drugged	Gender-nonconformity
People-too few	Transition-Related-pre
People-cops or security	Transition-Related-during
People-assistance non carceral	Transition-Related-post

I started initial coding using the anticipated codes with the surveys and continued initial coding through the interviews. Frankly, the depth of combined knowledge from well-established transportation literature, Black feminism, sociology, socio-psychology, and urban design generated robust anticipated codes. The anticipated codes covered most of what arose in the initial coding, likely due to the breadth of literature reviewed, such as travel demand with personal and transit characteristics involved in decision making, gender norms reflected in expectations of behaviors, and components of intersectionality in enforcement of social hierarchies. The literature and my personal knowledge gained from existing as visibly queer and being a part of queer communities informed the anticipated coding, but it did not preclude new codes arising in the initial coding process.

During initial coding, additional themes and codes were added as needed, such as “Accessibility-sidewalks” and “Accessibility-COVID or masking or respiratory illness.” This step continued through the interview data. From the surveys, two codes within the anticipated themes (Table 2) and eleven codes across three additional themes arose (Table 3). From the interviews, eight codes across three additional themes came up (Table 4). In hindsight, all of the additional themes and codes could have been anticipated from personal experiences on transit and the literature. For example, I have been harassed about body size on transit in different US cities; accessibility is a mainstay of disability and mobility studies; and knowledge gained through being told about a friend’s experiences can influence our decisions.

Table 2. Additional initial codes for anticipated themes from surveys.

Harassment-focus-body size	Service-real time information
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Table 3. Additional initial themes and codes from surveys.

Accessibility-bike accommodation	International-gender related
Accessibility-cost	International-not gender related
Accessibility-embarking or disembarking	Society-anti-discrimination cultural shift
Accessibility-overstimulating	Society-housing support
Accessibility-sidewalks	Society-mental health support
Accessibility-COVID or masking or respiratory illness	

Table 4. Additional initial themes and codes from interviews.

Deservingness-Harm	Knowledge-personal experience
Deservingness-Help	Knowledge-friend or associate experience
Transit-Rider-experienced pre transition	Knowledge-news
Transit-Rider-unexperienced pre transition	Knowledge-unspecified origin

The codes were then aggregated. Finally, codes were analyzed for relationships between one another, which resulted in some of the focused codes being moved from one theme into another. For example, when lighting was mentioned relative to safety at night, it was moved into “Space-Time-night or dark”; when lighting was mentioned relative to being overstimulating, it was moved to “Accessibility-overstimulating.”

Semi-structured interviews

The semi-structured interviews allowed me to gather data to build a richer and deeper understanding of the public transit experiences of trans individuals. I used a modified version of the interview instrument from my 2019 pilot study (see appendix A). Interview participants were

drawn from the pool of 113 volunteers who submitted contact data via the survey. Divided first by the nine US census divisions, I initially selected 3-4 people to reach out to from each region. I purposefully attempted to reach as broad a spectrum as possible by gender identity, gender expression, race/ethnicity, and age within each region. Not all invitees ultimately elected to sit for an interview. When an invited participant did not sit for an interview, I invited another from the same region though I still did not interview as many as anticipated. I interviewed people until saturation. In total, I interviewed 22 participants, though I had initially anticipated interviewing about 30 (between 25-35) participants due to the diversity of the study population.

I contacted potential interview participants via the information they had volunteered on the survey (phone, email, or social media direct messaging). I arranged for a one-hour window for an initial interview. The initial interviews took place over the phone or on Zoom as per the interviewees' preferences. I arranged for an email follow-up of a draft summary of my takeaways from the initial interview with the option of a half-hour follow-up interview for clarifications as needed—this proved unnecessary. With informed consent, the interviews were audio recorded and stored on physical devices that are password protected. Participants received no monetary compensation.

I transcribed the interviews using the software program otter.ai for the initial transcription. I listened to the interviews and reviewed the otter.ai-generated transcripts for accuracy, correcting any ai transcript errors. I then listened to the interviews again, took note of quotations, coded with the initial concepts using the coding from the surveys (Table 1, Table 2, Table 3) and new themes and codes (Table 4), and jotted down related thoughts. To be clear, I used the anticipated and initial themes and codes from the surveys for coding the interviews. A new theme, as covered in the discussion, was “Deservingness” with codes of “harm” or “help.” I then compared themes within and between the surveys and the interviews. Findings from the interviews were considered in concert with those from the surveys as a grounding method.

Why surveys and semi-structured interviews?

Transportation as a field lacks data when it comes to trans and gender nonconforming transit riders. Transportation research also often prioritizes quantitative over qualitative research. In order to create transportation surveys with valid gender questions, however, transportation research needs to integrate findings from other fields, such as sociology and socio-psychology, within an urban planning framework. Both the close-ended and open-ended questions of my survey aimed to do that, while surveying riders from across the US created the potential to gather enough quantitative data for statistical analysis. The semi-structured interviews allowed for a richer understanding of the particulars of transit experiences than written survey answers generally supplied. Thus, qualitative information from the interviews complemented both the quantitative and qualitative data from the survey.

Open-ended interview questions point to possible reasons for harassment, possible acceptable or unacceptable interventions, and possible holes in how the gender questions relate to harassment. They can also provide direction for valid gender questions on future surveys and suggestions for policy and design interventions. Thus, this dissertation research better informs the transportation planning field regarding the experiences and needs of an underrepresented, vulnerable group and moves the field toward asking more valid gender questions on surveys and interviews, particularly those involving experiences in public spaces and harassment.

Anonymity

Given the level of hostility, both institutional and individual, toward transgender and nonbinary people in the US, I paid particular attention to protecting the anonymity of the people who participated in my study. I did not want to create a (small) national database of transit-riding trans and nonbinary people. My greatest fear in doing this study has been and remains that I

inadvertently out a participant who then suffers persecution as a result. The probability is small, but I acknowledge the risk nonetheless because such an outing can have an outsized negative impact. With protecting anonymity in mind, I took the following steps. I did not require contact information in the survey. I deleted the survey and associated data from Qualtrics. I deleted the interview audio uploads and resultant transcripts from Otter.ai. I removed contact information before uploading the survey data into Dedoose. I deleted the data from Dedoose. Throughout the study, I stored data on password-protected hardware.

When referring to specific participants in the results and discussion sections, I used aliases. I wanted to avoid the dehumanizing effect of using numbers or letters to refer to people. Yet, assigning aliases to transgender and nonbinary people presents an ethical conundrum. It can be interpreted as a breach of autonomy because names can be deeply personal, as well as can be read as gendered. For example, my given name is not Tam, but I prefer the lack of gender associated with the name Tam in most places in the US. To give a binary example, using a name associated with men, such as John, for a trans woman would be incredibly derisive toward her autonomy. Even using a gender-ambiguous alias, such as Alex, could be seen as disrespectful if she chose a name strongly associated with women, such as Jane. So, I ask any participants reading this to give me grace in the convention I used.

I decided to use common tree names when quoting study participants. Tree names seemed benign with respect to gender without being totally dehumanizing, since people use them as given and chosen names. I did not quote the same participant more than once from survey or interviewees.

Research Challenges and Limitations

Conceptions of gender conformity exist along broad spectrums and are constantly shifting. Existing studies show that perceptions of conformity shift from context to context (Lick et al., 2019). For example, an individual feminine woman of local average body type appears to

conform to gendered expectations of sexuality on her own but may violate gendered expectations if she appears with a woman who looks too masculine to conform to expectations. Similarly, a man might be assumed to be straight unless the perceiver sees him at a gay bar (Lick et al., 2019). The presence and body language of other people surrounding the target—such as travel companions and travel strangers (other people on the bus) may shift perceptions (Lick et al., 2019). Neither the sexuality nor gender expression of this ‘classic’ woman changes, but the types of harassment she receives (likely) do change with the added context of a seemingly highly personal relationship with a visibly butch lesbian. When this ‘classic’ woman is harassed on transit, she has to guess at the perception of the harasser within the context of a particular moment. It can be hard to know whether and how much of any given instance of harassment has to do with gender or its expression of conformity, when so many other social hierarchy categories and context clues are at play. This study focused on the experiences of transgender and nonbinary people as they interpreted those experiences. This necessarily leaves an incomplete picture of the context. Some of the main challenges are that this study lacks the viewpoints of harassers, but also the voices of youth (as victims or harassers). Methodologically, two additional limitations of the study are 1) its lack of randomized recruitment and 2) its rather small sample that did not a) avoid false negatives for the whole sample or b) allow for statistical analyses of sub-samples within the sample. I discuss these limitations in more detail below.

Lacking harassers’ viewpoint. Harassers have reasons why they harass others. However, this study only heard from the victims and not the perpetrators, as I did not interview/survey harassers. Thus, I will not have a window as to why harassers choose certain victims over others, which is outside the scope of this research.

Lacking the voices of youth. Adolescents take transit. From what I experienced as a teenager and have seen with my own eyes, the transit experiences of youth are not the same as those of adults. While prior studies emphasize overlapping concerns with adults—such as increased risk of harassment and assault at night, cost barriers, and lack of service—youth have different tasks and social concerns during the day—such as commuting to and from school and harassment (bullying) from peer groups (Reed et al., 2021). However, this study did not survey or interview youth, thus missing their perspectives.

Lack of randomized recruitment. Without a database of transgender people from which to draw a random sample, random recruitment simply was not possible. Snowball recruitment is inherently not random as it relies on personal networks of social webs. The base assumptions of statistical analyses require randomization for significance and generalizability (Southampton, 2024). This hampered my ability to apply findings broadly or generalize to the larger US population of trans and nonbinary people.

Small sub-samples and false negatives. Because of the small sub-samples, it was not possible to assume that the lack of statistical significance for tests of the whole sample was correct for variables with small or medium effect sizes (Serdar et al., 2021). This means that the study could have failed to reject a null hypothesis, when it should have rejected that hypothesis. Another way of saying this is that the study's statistical analysis could show that something (an independent variable) is not important to an experience (dependent variable), when this was not actually the case.

Small sub-samples and intersectionality. It was difficult to examine intersectional differences among respondents because of small sub-samples. The difficulty and sensitivity of accessing a vulnerable population meant that the data could not meet base requirements for statistical

analyses of sub-samples (Southampton, 2024). As result, I was unable to examine the influence of intersectionality.

There may be other limitations in my sample selection because of the following:

1) Trans people commit suicide at higher-than-average rates, which results in survivor bias.

Transgender people attempt suicide at much higher (9x) rates than cisgender people in the US (James et al., 2016). Though it is difficult to accurately collect data in the US, a national cohort study of Danish-born documented trans people showed higher rates of suicide mortality than their presumably cis counterparts (Erlangsen et al., 2023). The higher rates of suicidality has been attributed variously to the effects of social exclusion, structural discrimination and violence, trauma, interpersonal violence, internalized stigma, depression, and substance abuse (Bränström et al., 2022). Many complete their attempts. People who would otherwise have qualified for and wanted to take my survey but died prior to doing so could not be included. If harassment and assault in a public transit environment contributed to those suicides, I have no way of accounting for it in this study. Only the trans and nonbinary transit riders who survived their life experiences to that point could take my survey and volunteer to be interviewed.

2) The experiences of sexual harassment and bullying are traumatic. An unknown number of potential participants may have not wanted to participate in the study to avoid revisiting and detailing deeply traumatic incidents and experiences.

3) Trans and gender nonconforming (GNC) people, who have the means to take private automobiles (whether driving or as a passenger) may choose to take cars rather than transit more often than their conforming binary counterparts due to their heightened risk of harassment. (This is hard to tease out in the data because cars offer convenience in many other ways.)

4) Many trans and GNC people do not interact with university or city/metro LGBTQ+ resources and centers, so my survey sample may have been biased toward extremes of education and poverty given user groups.

5) People in my social media circles are more likely to be enthusiastic transit riders with greater than the average person's understanding of transit systems and policies.

6) Lastly, the sample did not include participants without internet access.

The above research challenges prevent me from being able to claim generalizability of my findings from a statistical lens. As such, this study's findings which are discussed below, while rich and illuminating, are indicative of experiences of what many trans people face when using transit without claiming to be the total experience. Nevertheless, they are useful in understanding the breadth of experiences and informing approaches to reduce marginalization.

CHAPTER 4 EMPIRICAL FINDINGS

Survey Data

The final survey data set consisted of 353 respondents. Though the initial survey responses collected between November 2022 through March 2023 totaled 619, only 353 responses met the inclusion criteria. Of the 263 removed surveys, 61 were spam, 65 were blank, 19 did not respond to the gender or gender description questions, 96 did not specify a geography, and 22 specified geographies outside the United States. At least one eligible respondent completed the survey from all nine US Census Divisions, but only 33 of the 50 states and only one of the US territories—the District of Columbia—had respondents (Table 2). New Jersey and New York are combined in the state count because the geographic overlap of the transit resulted in people experiencing them and labelling them together. The geographic population distribution of the respondents does not match the overall population nor transit use distributions within the US. For example, New York + New Jersey + Connecticut as a region would have 4 times the total number of trips relative to the Chicago or Los Angeles regions (APTA, 2020). The differences between this study sample and population and transit use distributions likely come from the non-random sampling for this study.

Table 5. US territories and states with respondents.

TERRITORIES		COUNT	
District of Columbia	10		
STATES		COUNT	
Arkansas	1	Nevada	2
Arizona	2	New Jersey / New York	40
California	79	Ohio	2
Colorado	7	Oklahoma	2
Connecticut	1	Oregon	22
Florida	2	Pennsylvania	18
Illinois	29	Rhode Island	2
Kansas	1	South Dakota	1
Kentucky	1	Tennessee	1
Massachusetts	38	Texas	1
Maryland	4	Utah	15
Michigan	4	Virginia	2
Minnesota	9	Vermont	1
Missouri	6	Washington	41
Montana	1	Wisconsin	5
Nebraska	2	West Virginia	1

The demographic responses included gender identity (Table 3), transgender identity (Table 4), age (Table 5), and race (Table 6). Survey participants could check all gender identities that applied. Gender identity skewed heavily toward nonbinary (61%) in this sample

(Table 3). A Williams Institute analysis of US LGBTQ+ data collected from 2016-2018 showed only 32% of the transgender population identifying as nonbinary (Wilson & Meyer, 2021); yet, a more recent Pew Center study showed 44% binary trans and 56% nonbinary/other among those who were not cisgender (3% binary trans men and 1% binary trans women compared to 4% nonbinary and 1% some other description) (Braga, 2025a). For the binary trans identities, this sample skewed toward women (21%) more than men (13%) in contrast to the Pew Center study. Several participants identified with both binary and nonbinary gender labels (Woman/Nonbinary 3%, Man/Nonbinary 2%). The differences between this study sample and the other studies could come from the non-random sampling for this study. They could also be due to shifts in the conceptualizations of transgender and nonbinary gender identities in the years between each of the three studies cited above.

Table 6. Gender identity among survey respondents.

	Count	Percent
Nonbinary	215	61%
Woman	75	21%
Man	47	13%
Woman/Nonbinary	9	3%
Man/Nonbinary	7	2%
Grand Total	353	100%

The vast majority of survey participants identified as transgender whether as men, women, or nonbinary; yet not all survey participants identified as transgender (Table 4). About 10% of participants identified as nonbinary, or a gender under the umbrella of nonbinary, without identifying as transgender. Again, this contrasts with the earlier Williams Institute study that showed 58% of nonbinary people not identifying as transgender (Wilson & Meyer, 2021). The contrast could be due to the non-random nature of the survey sampling, and/or it could be due to shifts within conceptualizations of nonbinary and transgender identities in the years between the data collections of the studies. The shifts in conceptualizations of nonbinary identities and the ways they intersect with transgender identities could also partly explain the differences mentioned earlier about the proportion of binary to nonbinary identities in this survey versus the earlier Williams Institute and Pew studies.

Table 7. Transgender identity among survey respondents.

	Yes	No
Nonbinary	193	22
Woman	74	1
Man	47	0
Woman/Nonbinary	8	1
Man/Nonbinary	7	0
Total	329	24

The survey results skewed toward younger populations, with young adult respondents (age 18-29) representing 58% of the sample (Table 5). Mostly, this comes from broader trends of younger-age cohorts identifying with LGBTQ+ communities as social acceptance increased. It gets closer to alignment with the Pew Center findings that 66% of transgender LGBTQ+ adults fall in the 18-29 age group; similarly, the 40s group matches at 6%. (Braga, 2025b). The representation of respondents in their 30s in this study at 33% (Table 5) versus 20% in the Pew Center sample seems to account for this study's under representation of young adults, people in their 50s, and people 60+ (Braga, 2025b). Thus, compared to the one study available that breaks down trans identities by age, this sample overrepresents people in their 30s. This difference likely comes from non-random sampling.

Table 8. Age among survey respondents.

	Count	Percent
Blank	1	0.5%
18-29	204	58%
30-39	117	33%
40-49	22	6%
50-59	8	2%
60+	1	0.5%

The racial makeup of this sample skewed heavily towards white/Caucasian (Table 6) when compared to the US national rate of 58% for non-Hispanic white (*U.S. Census Bureau QuickFacts*, n.d.). Parenthetically, the Pew Center study did not indicate the distribution of its participants according to race/ethnicity characteristics. The survey sample for this dissertation research underrepresents all people of color. For example, nearly 14% of the US population identifies as solely Black/African American (*U.S. Census Bureau QuickFacts*, n.d.)—a far greater proportion than the 2% of survey respondents. This contrast likely comes from the non-random sampling for the survey, particularly the increased likelihood of reaching white respondents through my personal network and collegiate resource centers.

Table 9. Race among survey respondents.

	Count	Percent
Asian/Pacific Islander	19	5%
Black/African American	8	2%
Latino/a/e	22	7%
Mixed Race	43	12%
Other (list)	9	3%
White/Caucasian	252	72%

Interview Data

Of the 22 interviews that took place between April 2023 and October 2023, one was over the phone while the rest took place over Zoom video calls. The longest interview lasted nearly an hour and a half, the shortest went less than 20 minutes, and most took about 45 minutes. Nearly one-third of survey respondents (113) volunteered to be invited to an hour-long interview.

I selected interviewees to reach the broadest demographic pool, given my sample—first by Census Division (geography), then gender identity, race, and age. No survey respondents from Arkansas, Louisiana, Oklahoma, or Texas (Census Division 7) volunteered to be interviewed. From the 113 interview volunteers, I invited 52 to be interviewed. Of the 52, three cancelled their scheduled interviews, one declined the invitation, and 26 did not respond to the invitations. As mentioned earlier, I reached saturation at 22 interviews. These 22 interviewees described transit experiences from at least of one territory (District of Columbia) and 16 states (Table 7).

Table 10. US territories and states with interviewees.

TERRITORIES		COUNT	
District of Columbia	2		
STATES		COUNT	
California	3	New Jersey / New York	2
Colorado	1	Rhode Island	1
Florida	1	South Dakota	1
Illinois	1	Tennessee	1
Kansas	1	Virginia	1
Kentucky	1	Washington	2
Minnesota	2	Wisconsin	1
Missouri	1		

Other than their locational characteristics, all 22 interviewees identified as transgender, of whom 7 identified as nonbinary (with some specifying specific identities under the nonbinary umbrella), 8 as women, and 2 each as men, women/nonbinary, and men/nonbinary (Table 8). Fewer survey respondents of color volunteered for interviews relative to white respondents in both absolute numbers and proportionally, which resulted in fewer of those interviewed being people of color compared to the white interviewees. Thus, the interview sample skewed white compared to the survey sample with only three interviewees of color (Asian/Pacific Islander, Black/African American, Latino) (no table). The ages of the interviewees ranged from 18-59, skewing toward middle age compared to the survey sample (Table 9). These overrepresentations could be due to the non-random sampling of the survey followed by inclinations and inhibitions of volunteers to give their time to be interviewed by someone with different identities and life experiences from them (namely, a middle-aged white trans masc

genderqueer graduate student); such differences have been found to affect willingness of people to participate in research and respond to survey or interview questions (Holbrook et al., 2019).

Table 11. Gender identity among interviewees.

	Count	Percent
Nonbinary	8	36%
Woman	8	36%
Man	2	9%
Woman/Nonbinary	2	9%
Man/Nonbinary	2	9%
Grand Total	22	100%

Table 12. Age among interviewees.

	Count	Percent
18-29	9	41%
30-39	7	32%
40-49	4	18%
50-59	2	9%
60+	0	0%
Grand Total	22	100%

I approached the data from the surveys and interviews as subsets to triangulate with one another in one large overarching set. Thus, I analyzed the interview data in conjunction with the survey data. I intended to primarily use the interview data to check the findings of the survey data and secondarily to identify themes beyond the survey's findings. I evaluated the quantitative statistics with what I had found in the qualitative coding. I considered the qualitative findings in relation to the quantitative findings. The analysis process formed more of a spiral flow than a linear one. I present the study findings below as a unified whole with the survey findings foregrounded and the interviews as grounding in support or contrast.

Regarding Null Hypothesis 1

Null Hypothesis 1

A person who identifies as transgender and/or nonbinary (independent variable) is as likely to experience harassment on transit (dependent variable) as a cisgender man or cisgender woman.

Finding: Rejected in this sample for both bus and train transit.

In the surveyed sample, a trans and/or nonbinary transit user was more likely to have experienced harassment on transit than in a U.S. national study of sexual harassment (see Table 10, Table 11) (Kearl, 2018). Of the survey respondents, 57% reported being harassed on the bus and 58% on the train. For both the bus and the train, the results held statistical significance per a chi-square test (χ^2 result >5.99, df=2, $p \leq 0.05$) with a medium association per Cramer's V (df=1, result >0.3) (Kim, 2017). Due to sampling limitations, the survey sample might not accurately reflect the population of trans and nonbinary transit riders in the US; thus, this finding strongly suggests that they are more likely to have been harassed than their cisgender counterparts but this is not definitive. This finding aligns with expectations given the higher social position of cis gender people over trans and nonbinary people in white supremacy.

Table 13. Harassed on the bus comparison between Kearl 2018 study and this dissertation.

	Yes	No	Total	Percent harassed
Cis men*	80	920	1000	8%*
Cis women*	260	740	1000	26%*
Trans &/or nonbinary^	192	146	338	57%^

* Source: Kearn, 2018, p. 21, public spaces, mass transportation

^ Source: this dissertation

Table 14. Harassed on the train comparison between Kearn (2018) study and this dissertation.

	Yes	No	Total	Percent harassed
Cis men*	80	920	1000	8%*
Cis women*	260	740	1000	26%*
Trans &/or nonbinary^	167	119	286	58%^

* Source: Kearn, 2018, p. 21 public spaces, mass transportation

^ Source: this dissertation

I used the Kearn study to test for statistical significance because it was the closest relevant and robust study to provide enough information to do so. In the Kearn (2018) study, the consulting firm GfK collected a random sample across the US by address (with support to provide internet and laptops to bridge lack of electronic access) to conduct an online survey of 2,000 participants (2,009 completed, weighted to be a sample size of 1000 males and 1000 females) about their experiences with sexual harassment and assault (including examples of

such behaviors) (Kearl, 2018). The study was nationally representative based on race, income, disability, LGB, and transgender demographics (Kearl, 2018). Though the Kearl survey included one question about gender identity with options of “cisgender,” “transgender,” and “other,” wherein 13 marked “transgender” and 5 “other” (with 63 declining to respond), their data was assigned male or female according to the forced/required question that only allowed for male or female (Kearl, 2018).

Again, findings from prior studies on harassment in transit spaces found higher rates of harassment when compared to the Kearl (2018) national study (Ding et al., 2020; Kearl, 2018). Even when also asking about sexual harassment specifically, a 2018 Washington D.C. Metro (train) survey found that 21% of all riders had experienced sexual harassment, and women were twice as likely than men to be harassed (in Ding et al., 2020). When asking about harassment broadly in transit environments, which is different from the Kearl (2018) study, yet more similar to my study, a 2007 New York City (subway) survey found that 63% of all riders had experienced some form of harassment, 93% of whom were female; a 2018 Los Angeles Metro (bus and train) study of riders found that 26% of women and 21% of men experienced some form of harassment (over the past 6 months) (in Ding et al., 2020). It could be that NYC truly differs from the rest of the transit environments in the U.S. For all of the studies, including mine, the difference in transit space harassment in the Kearl study’s rates could depend on whether the national data accounted (or not) for ever using transit, which is unclear.

Harassment could be underreported in my study due to not specifically providing examples of harassment to respondents. Indeed, all interviewees for this study—even those who had marked as having experienced “no harassment” in their survey responses—referred to behaviors that qualify as harassment when they were asked broadly about negative experiences with transit.

Regarding Null Hypothesis 2

Null Hypothesis 2

A transgender person who does not identify as non-Hispanic white (independent variable) is as likely to experience harassment (dependent variable) on transit as a non-Hispanic white cisgender person.

Finding: Rejected in this sample for bus transit only.

Within the survey sample, a respondent of color was more likely to have experienced harassment than non-Hispanic white respondents when using the bus, 66% versus 53% respectively (Table 12). The results for train transit were not statistically significant in this sample. The results for bus transit held statistical significance per a chi-square test (χ^2 result >3.84 , $df=1$, $p \leq 0.05$) with a small association per Cramer's V ($df=1$, result >0.10) (Kim, 2017). It is unclear why the results hold statistical significance for the bus but not the train. For trans and nonbinary people of color, their gender isn't always the main form of discrimination they face. One survey respondent explained it succinctly with one word when they answered why they do not ride transit more frequently: "racism." Due to sampling limitations, the survey sample might not accurately reflect the population of trans and nonbinary transit riders in the US; thus, this finding strongly suggests that trans and nonbinary riders of color are more likely to have been harassed than their white trans and nonbinary counterparts, but the finding is not definitive. Again, this finding aligns with what one might expect in a white supremacist social order.

Table 15. Harassed on the bus by race/ethnicity.

	Yes	No	Total	Percent harassed
White (non-Hispanic)	130	114	244	53%
Respondents of Color	62	32	94	66%

Looking once more at the Kearl (2018) national sexual harassment survey for comparison, no statistically significant difference existed in sexual harassment (excluding assault) in public spaces between race/ethnicity for women—partly because of the high prevalence of sexual harassment among all groups—while it did vary for men (38% of Hispanic, 25% of white, 20% of mixed-race, and 17% of Black men) (Kearl, 2018). It is unclear why sexual harassment rates in public spaces were found in the Kearl study to be the lowest for Black men. This could be related with how Black men’s bodies are socially constructed as violent, while bodies that are deemed sexualized are often treated as less of a physical threat; thus, most Black men’s bodies might be seen as too potentially dangerous to harass sexually (Washington et al., 2026). For example, gay and bisexual men in public spaces are more likely to experience sexual harassment than their straight counterparts (Kearl, 2018). At the extreme end of violence, though collecting and analyzing data remains challenging, and victims most frequently know their attackers in cases with identified assailants, Black and Latina trans women are more likely to be murdered than their cis counterparts (Westbrook, 2022); indeed, Black trans women make up half of all murdered trans women (Halliwell et al., 2024). It therefore appears that this study’s finding that trans and nonbinary people of color are more likely to have experienced harassment in transit environments aligns with findings of studies of harassment and violence against queers of color. It is difficult to say whether this finding aligns with the interview data

given the few interviewees of color, but it seemed to align. This aligns with queer Black feminist theories of white supremacy in the US.

Regarding Null Hypothesis 3

Null Hypothesis 3

A person who identifies solely as binary transgender (independent variable) is as likely to experience harassment (dependent variable) as a person who identifies as nonbinary.

Finding: Failed to reject in this sample, for both bus and train transit

Within the survey sample, the differences in the harassment rates of nonbinary identified respondents and binary trans identified respondents were not statistically significant (chi-square or Cramer's V) on either the bus or the train. Not all nonbinary people hold "trans" as an internal identity (Darwin, 2020) The rates from the sample are provided for reference (Table 13 & Table 14). Due to sampling limitations, the survey sample might not accurately reflect the population of trans and nonbinary transit riders in the US; thus, this finding strongly suggests a lack of difference in likelihood of harassment between binary trans and nonbinary riders but is not definitive. This finding aligns with the interview data. This finding aligns with what one might expect given the mechanizations of white supremacy.

Table 16. Harassed on the bus by binary transgender and nonbinary gender identity.

	Yes	No	Total	Percent harassed
Binary transgender	63	56	119	53%
Nonbinary (any)	129	90	219	59%

Table 17. Harassed on the train by binary transgender and nonbinary gender identity.

	Yes	No	Total	Percent harassed
Binary transgender	53	48	101	52%
Nonbinary (any)	114	69	183	62%

To test for statistical significance, binary trans women and binary trans men were counted as one group; all who indicated nonbinary, woman/nonbinary, and man/nonbinary were counted as one group. Any harassment level counted as harassed. More respondents took buses than trains, presumably due to the lack of rail service to their destinations or the absence of rail transit from their geographic area.

This finding aligns with what one might expect given the underlying rationale of white supremacy as explained by queer Black feminist theorists. White supremacy is an external system applied to individuals by social institutions and other individuals who internalized that system. Gender identity, the internally held identity of an individual, does not determine how other people treat that individual. The alignment of external gender expression with others' expectations—expectations that are themselves predicated on external cues such as body size and body language—combined with others' internal heuristics of social norms result in the behaviors of those other people. For example, the words I use to describe my internal gender identity have changed throughout my life as I gained a wider and deeper understanding of the world and a larger vocabulary; yet I have been harassed in public by adults about my gender expression since at least the age of seven. While it seems that trans and nonbinary people are more likely to express gender in ways incongruent with social expectations of cisgender embodiment, the gap between expression and others' expectation might not be related to an individual's identity. Plenty of people who identify as nonbinary move through the world being

read as cisgender men, others as cisgender women. Clearly, some binary trans women and trans men move through the world being read as not-cis-women and not-cis-men. Clearly, some cisgender women are read as trans and harassed by other people. Social hierarchy undergirds these public social interactions, white supremacist social hierarchies in the US.

The above findings support the longstanding theoretical assertion that public spaces act as spaces of social order enforcement via harassment. The discussion below brings the text analysis of the surveys and interviews together. Most of the interview findings primarily acted as a check or way to ground the survey findings. One main interview finding from beyond the surveys—regarding the concept of deservingness—is covered in the discussion below as well.

Discussion

The analysis of the survey and interview findings indicate that the experiences of transgender and nonbinary people in US transit spaces seem to roughly follow what one could reasonably expect when applying basic travel demand theory within an intersectional social context that can handle the lived complexities of gender. The surveys and interviews both demonstrated that infrastructure failures and social hostility affect mobility. The interviews revealed how trans and nonbinary riders conceptualize understandings of social norms of who deserves what treatment. The nature of the negative experiences might stand as severe even if unsurprising.

Limits to Mobility

The analysis of the survey and interview findings clearly shows the multiple challenges faced by transgender individuals as they seek to negotiate transit environments in the city.

Respondents took transit less often than they wanted

As anticipated by the literature, many survey respondents reported taking transit less often than they would have if they were not facing any obstacles. Of note, over a quarter of the listed reasons related to service issues (27%), closely followed by reasons related to avoiding harassment or safety issues (23%). Reasons given as answers to survey question 3, "Please list the reasons that make you avoid using public transit more often, starting with the most important. (short answer)," fell into nine categories: service issues, avoid harassment or safety issues, convenience, accessibility issues, no answer, avoid crowds or people, transit trips unaffected, walk or bike instead, and cost (Table 15). Of the 353 respondents, 36 did not answer this question. The percentages referenced in the table are based on the number of coded reasons in total (N=707), not the number of respondents. The reasons given in this study for not taking more trips by transit align with findings from other transit studies (Carrel et al., 2013; Alam et al., 2018; Taylor & Fink, 2003; Ceccato & Loukaitou-Sideris, 2020; Ceccato et al., 2024).

Table 18. Reasons given for not taking transit more often (N=707).

	Count	Percent
Service issues	188	27%
Avoid harassment or safety issues	166	23%
Convenience	127	18%
Accessibility issues	69	10%
No answer	36	5%
Avoid crowds or people	34	5%
Transit trips unaffected	30	4%
Walk or bike instead	28	4%
Cost	29	4%

Infrastructure failures limit transit mobility

The reasons given for choosing not to ride transit more often track with those found in prior studies of women harassed on transit—poor service, fear of violence, monetary cost, and unclean environments (Ceccato & Loukaitou-Sideris, 2020). Foremost, respondents took transit less often (or stopped entirely using it) due to the same reason most people in the U.S. do not take transit more: a mismatch between travel needs and transit service. Service issues comprised 27% of the responses as to why people did not take transit more often (Table 15). The responses categorized as service issues covered included shortcomings in route network,

span of service, trip time length, frequency of service, reliability of service (Table 16). These findings are congruent with many of the comments received, such as “there isn't a bus that goes to my job” and “I have a car and it is faster.”

Table 19. Service issues reasons given for not taking transit more often (N=707).

	Count	Percent
Lack of service (area)	82	12%
Lack of service (frequency)	50	7%
Service failure (unreliable)	28	4%
Service failure (cleanliness or comfort)	16	2%
Lack of service (span)	12	2%

The monetary cost of riding transit prohibited some respondents (29 of 353, 8%) from taking transit more often (Table 15), including a few respondents who compared the price of transit fares against the cost of driving cars (primarily gas + parking). Deciding that driving is less expensive than taking transit could be due to people only considering the cost of gas and parking as the cost of driving the car; essentially, the full operating cost of the private vehicle is applied to the uses and destinations not possible by transit, leaving only the immediate marginal cost of a car trip (gas + parking) to compare against a transit fare rather than a comprehensive net cost evaluation over time of the car-versus-transit calculation. Generally, when respondents named cost as a reason for not taking transit more often, they provided no more detail than

simply, “cost.” The general lack of cleanliness of stations, stops, and transit vehicles also served as a factor for some to use transit less.

About one in 12 respondents mentioned disability-related factors that limit their transit use (29 of 353, 8%) (Table 15). Unsurprisingly, given past research, some people with wheelchairs used transit less due to physical factors, such as poor sidewalk maintenance, lack of or inappropriately steep ramps, lack of or unreliable lifts (elevators for stations, lifts for buses without ramps) and limited space on transit vehicles (Bezyak et al., 2017). Also unsurprisingly, given research into use of public spaces, people mentioned “overly bright lights” and noise as deterrents from transit use (Aalborg University & Hvass, 2022; Bild et al., 2016). Yet, unlike the bulk of prior public space or transit research, respondents who mentioned the concerns about overstimulation (aural, visual, etc.) tended to frame it in terms of neurodivergence, using phrases such as “lack of diverse understanding of accommodations.” While the lights and sounds of transit might not bother neurotypical riders, neurodiverse travelers reported experiencing some transit environments as overwhelming. Indeed, many described taking transit as exhausting.

Social hostility limits transit mobility

One third of respondents, over 100 people, mentioned fear of violence—from harassment to stalking to sexual assault—as a major motivating factor to travel behaviors that limit their mobility. Avoiding harassment or safety issues comprised 23% of the answers given for not taking transit more often—the second most frequent category after service issues (Table 15). In the context of this study, “safety” takes on the common use meaning of the word as personal safety—not the narrower idea of vehicle malfunction or operator error type of safety found in engineering—relating to the sense of wellbeing and security of a person (Ceccato et al., 2022). When asked why they avoid taking transit more often, many respondents listed “safety” (35 times) or “harassment” (20 times) without further detail of the specifics.

Unfortunately, only eight respondents included specifics about the types of violence encountered that made them change their transit behavior (Table 17); 27 respondents offered attributions to the violence encountered, with the majority of them pointing towards transphobia (10) and misogyny (8) (Table 18). Thirty-six respondents indicated times and areas perceived as potentially violent, with two-thirds of them indicating “nighttime” as a potentially violent time (Table 19). Lastly, 16 respondents indicated the types of people who could potentially inflict violence upon them, which included “other passengers, police officers, unhoused people, mentally unstable, or intoxicated people” (Table 20). Ash shared in their survey responses that they have been “bullied, called names, slapped, punched, beaten into a coma, laughed at, [and] followed,” while taking the bus.

Table 20. Potential violence types explicitly referenced (n=8).

Violence types	Count
Verbal (death threats, slurs, bullying, sexual or offensive comments)	5
Physical (stalking, assault, sexual assault)	2
Visual (stared at)	1

Table 21. Potential violence attributions explicitly referenced (n=27 responses).

Violence attribution	Count
Transphobia	10
Misogyny	8
Discrimination (unspecified)	4
Racism	2
Fatphobia	2
Homophobia	1

Table 22. Potentially violent times and spaces explicitly referenced (n=36).

Violent times and spaces	Count
Nighttime	24
Stops or stations	5
Neighborhoods	3
Off-peak/non-commute hours	2
Routes	2

Table 23. Potentially violent people feared by respondents (n=16).

Violent people	Count
Other passengers specifically	5
Cops	4
Mentally unstable people	3
Unhoused people	2
Men (especially if intoxicated)	2

The types of violence, spaces, and times explicitly stated as reasons for not taking transit more often—particularly fear during nighttime travel—track with findings of concerns that women voiced in other studies (Ceccato & Loukaitou-Sideris, 2020). Avoiding certain neighborhoods, routes, or stops is also a common risk mitigation technique. Fearing other passengers, however, stands out as an unusual answer that could warrant further research into whether other marginalized-but-not-gender-minority people also frame who they fear as non-riders, other riders, or specific subgroups. Respondents shared experiences like, “[other passengers] have refused to sit next to me or attempted to fondling me asking if I was boy or girl,” when taking transit.

The survey showed that participants felt they had to limit their transit mobility. One third of survey respondents made different travel choices because of safety concerns and fears of harassment. The stated reasons reveal a pattern of using avoidance to mitigate risk. A couple of people reported avoiding sitting far from bus drivers with survey responses such as “always sit close to the bus driver to try to be very visible.” During their interview, Birch shared their story of

an experience that highlighted interplays between harassment and social hierarchy, as well as defensive actions taken in the moment.

In Spring of 2021, I was riding to work when these two older white men in the section of seats behind me were talking loudly and laughing about how they were proudly unvaccinated and they hoped that every “liberal queer” who took the vaccine would die a slow and painful death.

I didn’t interact with them. I got up and moved to another section to sit and they noticed. They immediately started asking me if I was a “tranny” or a “faggot” and made multiple jokes about the AIDS epidemic. They told me that they hoped I would die a cold and painful death just like the “faggots” from the 80’s.

I got up and sat next to the driver for the rest of the ride because I was scared they would hurt me. They yelled at me when I got off but I didn’t hear them or see them again.

All of these behavior changes and precautions in an effort to stay safer have also been reported by women in prior harassment and transit research (Ding et al., 2020). With the exception of where to sit on the bus, all of these avoidance practices also limited the participants’ freedom of movement by transit, and on transit. When they do ride, many respondents reported adjusting their behavior to reduce the risk of harm.

As Cedar shared in their interview, “Nothing makes you feel like a sitting duck for harassment like being at the stop for 15 minutes waiting.” The hostility could come from other riders or other people in the area. Dogwood explained in their interview, “Harassment often takes the form of words muttered under breath or passing yells from people. Largely this has happened from people in cars.” Some people could not be sure whether police officers (“cops”

as most respondents called them) or drunk, high, psychotic, or merely audacious strangers would accost them during their trips. Said Elm in their survey response, “People are wack.”

Many respondents recommended reduced or no police presence in transit environments, one explicitly citing “too many cops” as a reason for avoiding transit. Of the 80 survey respondents who mentioned any form of in-person security when asked what would help them feel safer, 40% recommended attendants or security other than police. Over half specified no cops/police. Only 6 respondents (5 of them white) proposed adding cops/police. This aligns with prior studies that show that trans and nonbinary people are less likely than their queer cis-gender peers to feel safe near police (Horizons Foundation, 2018). This could be due to the perception expressed by Fir that “the police always make it worse, so fewer cops and private security [are better].” As Ginko put it in their survey responses, “the train police tend to be hostile.”

Deservingness

The concept of deservingness—of being worthy of derision or worthy of assistance—arose from the interviews. In hindsight, this makes sense as it aligns with both a human drive for fairness and our socially constructed hierarchies that require each of us to constantly assign people that we see into those hierarchies as we navigate spaces; both require judgment and action (whether to uplift, leave be, or put down). Every time someone sees another person, the perceiver sorts that person into some social position relative to themselves and others; a sorting that dictates how to treat the perceived person in that immediate context. Enforcing social norms is an innate part of social species, neither good nor bad until put through a socially-constructed morality matrix (Tomasello & Vaish, 2013). As Hemlock said in their interview, “These structures are real, but they’re all made up.” Whether or not someone deserves particular notice at all rests in those social hierarchy structures.

To be clear, none of the interviewees said that they deserved to be harassed; they were commenting on their assumptions and perceptions of harassers and bystanders. Negative associations were clear from how survey respondents answered the question, “How do you think other people perceive of your gender and gender expression?” Their survey answers conveyed more than mere assignment of gender based on expression; some sample responses listed below also signal the hostility that these individuals feel from the part of their fellow riders: “confused,” “weird,” “they hate me,” “...as an insect,” and “...with great distaste and desire for violence.” These responses reveal that, in their understanding, gender as perceived by others comes with judgment as to how well they perform gender and a response based on that judgment—from emotion to ascribing low social status, and potentially dehumanization. This aligns with what one might expect given the structures and strictures of white supremacy.

While the survey lacked the structure to give the respondents space and time to discuss their insights from moving through the same transit spaces presenting as different genders to the wider world, multiple interviewees spoke not only about how people treated them differently overall prior to, during, and after their social transition, but also about how they anticipate bystanders would act if someone attacked them. One respondent’s interview narrative of how their experience and expectations of other riders—potential bystanders if someone harassed the respondent—encapsulates several concepts of how their fellow riders may feel: 1) Some people deserve protection from aggression; 2) some people don’t necessarily deserve aggression, but they ought to protect themselves; and 3) some people deserve aggression. Indigo shared,

[Prior to transitioning] I was a lot more relaxed, like, you know, I still felt uneasy around straight men, cuz, you know, some of them would try hitting on me or following me home after the bus or whatever. But that’s something that a lot of, like, women and people who present more feminine, we have to deal with, regardless. But, overall, I avoided the attention of like homophobes, or more like exclusively violent people. It’s just [that] I got

more unwanted, like romantic or sexual attention. So, it was like a different sort of harassment, but also happened less frequently. Because, you know, I looked like, you know, a nice, quiet little white girl Christian.

It was like, oh, if I feel uncomfortable, and people start paying attention, because I was a sympathetic figure, okay, because, you know, I was presenting as like, a feminine cis white girl. So, people saw me as more delicate and would be more eager to protect me.

Whereas now, people still see me as vulnerable, but, like that femininity that I had before, it's not seen as, like, I'm not seen as like a respectable victim anymore. I'm seen as like, oh, like, clearly, it's this faggot's fault for not being able to defend themselves, like, you know, like, they should go to the gym, or like, they should do this.

So, ...all of this stuff that made me, like, the ideal victim to be protected is now, like, I deserve whatever, like violence or comments get thrown at me...because they presume I could defend myself. But now it's just like, straight up, like homophobia and other things. And it's just really weird, where I have sort of like similar dynamics at play, but people process my presentation and other things like [in a] different way.

The context, in Indigo's case, was riding a public bus as a small-bodied (short and thin) femme-presenting young adult. They said they anticipated others' judgments of them changing with perceptions of them. When fellow riders read the person's embodiment as a "nice, quiet little white girl Christian," Indigo told me that other people on the bus would judge them worthy of protection (concept 1). When their embodiment moved into something read as an effeminate man, a "faggot," whether they deserved the harassment itself did not matter as much as other riders' thinking that a man ought to be able to defend himself (concept 2). Moreover, Indigo

understood that they had moved socially from “the ideal victim to be protected” to rightly receiving aggression as “whatever, like violence or comments thrown at me” (concept 3).

People go into public spaces with ideas of how they and other people will act and ought to act (Deitch-Stackhouse et al., 2015). Even at the most mundane level, when it came to onlookers, the expected default was inaction. As interviewee Juniper pointed out, “People are going to be shitty to you. Bystanders are not necessarily going to step in and do anything for you. Even if they’re not necessarily okay with you being harassed, they recognize that, if they do anything, the target is going to be them.” This sentiment aligns with research. People who see harassment happening might disagree as to whether the target ought to be harassed or to what extent, but they also might not want to take the risk of intervening (Deitch-Stackhouse et al., 2015). Respondents themselves knew that intervening carried risk, some because of personal experiences of intervening to enforce social expectations on a bus. As Koa responded on the survey, “Someone threatened to beat me up when I asked her to lower her voice while on the bus.” Whether to act, thus, depends on complex internal calculations of how much power an individual has or can raise with others in the moment to enforce their ideas of how people ought to act.

The ways in which harassment in transit environments correlates with gender aligns with longstanding theories of social marginalization and white supremacy. Violence, including harassment, acts as a reinforcement mechanism to maintain and recreate hierarchies over time and space. Thus, we observe trans and nonbinary people being harassed more often than cis women, who in turn are harassed more often than cis men in transit spaces (Ceccato & Loukaitou-Sideris, 2020; Ding et al., 2020; Grant et al., 2011; James et al., 2016; Lubitow et al., 2017). In addition to gender, as expected in an imperialist white supremacist capitalist cis-hetero patriarchal culture, respondents mentioned other forms of discrimination—such as ableism, sexism (particularly anti-femme), racism, Islamophobia, and fatphobia—when describing either their physical expression or their experiences of harassment. Though, surprisingly, self-reported

deviance from gender expression norms failed to stand out as significant to harassment rates, many survey respondents answered the question, “How do you think other people perceive of your gender and gender expression?” as some variation of “queer.” Perhaps transit users who are perceived as “queer” are harassed at high rates for a similar reason to those perceived as “women”—they are not cisgender heterosexual men. Anyone perceived as not-a-cis-hetero man is, by default, not at the top of the gender-sexuality hierarchy, which moves a transit user closer to the social status (and accompanying harassment) of women. Yet, queer also reads as not-a-cis-hetero woman, so it is necessarily lower than the ideal of a “proper woman.” In that situation, a person perceived as “queer” goes into an “other” category of some lower status (Collins, 2002; Johnson et al., 2015). Harassers could be picking up on such cues of otherness in trans riders, judging trans people as belonging to lower social status, then harassing the trans transit riders as an action to assert social hierarchy.

Taken together, the mobility limitations caused by inadequate infrastructure (physical and service), the higher rates of experiences of harassment, and the internal sense that other people might think that trans and nonbinary people don’t deserve help when harassed, these findings indicate that the violence in the social structuring of white supremacy shows up in mundane decisions like whether and how to take a trip.

To go a step further, the harassment of gender minorities reveals the social mechanisms of enforcing hierarchy on everyone. Yes, people who vary the most from expectation—in physical appearance or behavior—get harassed the most to place them lowest. Anyone who varies from conforming to the white supremacist ideal of a particular type of white cis gender heterosexual adult man needs to be put in place. Yet, we see harassment of and between every gender as people jockey for individual social position in context. Cis men harass and belittle other men; we see it in comments related to impotence or non-heterosexuality. Cis women harass other women; we see it in comments related to being in bathrooms. White trans people harass queers of color; those of us who spend enough time in queer spaces see it in comments

related to making “us look bad.” Harassment of gender minorities uncovers the lies of inherent superiority undergirding white supremacy by showing that it takes violence at every level to keep power concentrated with a select few. Until we change the laws, policies, and physical infrastructure to indicate otherwise and uproot the internalized values of white supremacy, gendered harassment will continue.

CHAPTER 5 PROPOSED INTERVENTIONS

As the survey and interviews clearly showed, feeling unsafe on transit because of past harassment and fear of experiencing harassment was very common among survey and interview participants. Public servants, particularly transportation planners, should then seek to mitigate the risk of and fear of harassment. They can work to affect the complex internal calculations of people and external interactions between people in transit environments by implementing policy changes. Policy changes can help shift the physical context, as well as how people are judged. The following proposed infrastructure improvements (both physical and service changes) are not new; this study provides further evidence of the necessity of those infrastructure improvements from the perspective of a hard to reach and understudied population. Below, I discuss both changes in the transit infrastructure and transit service that can help trans and nonbinary riders feel safer on transit. The recommendations discussed below (Table 24) are drawn from the survey and interview findings discussed in Chapter 4.

Table 24. Proposed interventions.

Realm of intervention	Arena of intervention	Examples of intervention
Infrastructure	Physical	Lighting, seating, cleanliness
		Walkability, urban development
	Service	Frequency, span
		Real time information, reporting app
Policy	Messaging	Tenor of laws with respect to gender
		Education campaigns
	Training	Recognize harassment and intervene
		Deescalation
	Onsite personnel	Non-police station attendants
		Social service providers
Research	Assumptions	Who to ask or center
		What to ask
	Barriers	Institutional
		Cultural

Infrastructure changes.

Infrastructure changes can decrease opportunities for hostile encounters and increase perceptions of safety (Ceccato & Loukaitou-Sideris, 2020). It is possible to address the service issues that accounted for over a quarter of the reasons given by survey respondents for not taking transit more often (Table 15, Table 16). The physical and service infrastructure interventions that would increase the mobility of transgender and nonbinary transit riders in the US would also increase the efficacy of transit as a mode of transportation in the US. Larch proposed in their survey response what prior transportation research already supported, namely

“Better maintained bus stops, (lighting, separation from traffic, benches, etc.).” To improve the physical aspects and design elements of bus stops, transit stations, and their adjacent environments in ways that make these spaces feel safer and more welcoming, transit agencies and responsible adjacent planning departments should add comfortable lighting (to increase perceptions of safety without causing glare headaches), provide seating (to reduce crowding and allow people to sit while avoiding bothersome people), increase cleanliness (to improve sanitation and allow people to feel welcome in the spaces), increase walkability (to remove barriers for people trying to reach and use transit), and increase human-scale urban development near transit (to increase natural surveillance or “more eyes on the street”) (Ceccato & Loukaitou-Sideris, 2021; Ceccato & Nalla, 2020; Suman & Bolia, 2018). Video surveillance, silent alarm buttons, and transit safety apps might also help some people feel safer (Ceccato et al., 2022); though it raises concerns about the potential abuse of surveillance technology for state targeting and tracking of populations. It should be noted that while such physical improvements would make most riders feel safer, preserving the wellbeing of transgender and nonbinary riders is sufficient impetus to make the improvements.

As discussed in Chapter 4 (see Table 15), problems with transit service were the most common reason why the survey respondents avoided using transit. Indeed, improved service would make transit more useful and safer for transgender and nonbinary riders, as well as all riders (Table 15). More frequent service could improve basic network utility by decreasing transfer time, allowing people to reach their destinations in less time or to reach more destinations in the same amount of time (Kujala et al., 2018). On-time service would enable riders to plan so that they can minimize their initial wait at a transit stop—and any risks associated with waiting in public (Suman & Bolia, 2018). In addition to more punctual transit service, more frequent service could decrease wait times at the beginning of or during trips (Kujala et al., 2018); thus, shorter headways decrease the time spent “like a sitting duck,” an especially important benefit at night, when -- as we saw in the survey -- most respondents

indicated as a potentially violent time (Table 19). Increased service frequency and/or larger carriages (longer buses or more train cars) during peak travel times could reduce overcrowding and the chances of physical harassment that come with overcrowding, such as groping (Suman & Bolia, 2018). In addition, technologies like transit apps that let riders know bus or train arrivals and transfers in real time when deciding on a trip, can help trans and nonbinary people decide when to step out of the relative safety of their origin to minimize waits at stops (Ceccato et al., 2024).

Policy changes.

Public messaging through educational campaigns from transit agencies, other government institutions, and the tenor of laws all need to emphasize the equality of trans, nonbinary, and all gender minorities; declare it unacceptable to harass people based on gender, particularly women, feminine-presenting people, and/or gender nonconforming people; and encourage bystander intervention (Nielsen et al., 2025). Mahogany put it clearly in their survey response that we need a “general shift in the perception of trans people. The transit is fine. It’s the social aspect that’s scary.” Transit operators could train employees—including their executive teams, vehicle operators, transit security, and even cleaning staff—to recognize harassment and intervene. Training in de-escalation techniques can help front-line staff to recognize, intercept, and defuse hostility toward transgender and nonbinary people (riders or otherwise).

When it comes to security-related staff, policy needs to lean toward onsite prevention and non-police personnel as prevention and first responders. Again, over half of the survey respondents who mentioned cops did not want increased police presence. As survey respondent Nandina stated, “I can tell you that the answer is not more police.” Station attendants, transit ambassadors, social work clinicians can help reduce anti-social behavior merely with their presence and can assist people with an appropriate level of resources for each situation (Wasserman et al., 2025). This would make transgender and nonbinary riders feel

more comfortable than increased police presence. Rather than police, Oak suggested in their survey response, “Overall better infrastructure and program services for those in need so they don't need to use the public transit as an apartment, bathroom, and drug den.” Attendants could redirect inappropriate behaviors of people under the influence of alcohol or drugs. They could also connect the unhoused with support agencies, as already happens with some US transit agencies (Loukaitou-Sideris et al., 2023). They could also call in trained mental health personnel in situations that arise because of mental health crises.

Since onsite personnel are not reasonable for all transit spaces, live monitoring of camera feeds in stations and on buses/trains could reduce the pressure on operators to divide their attention and decrease response time to incidents when they occur; a live chat or other actively monitored portal to report harassment in real time would enable other passengers and people in the transit spaces to signal a need for action (Ceccato et al., 2024). Indeed, several survey respondents mentioned real time options, such as Pine with, “it would probably help if the bus companies had like a chat portal in the app or a number you can text and call to get assistance in real time and report issues.”

But of course, the strongest, but long-term, way to increase the safety and utility of U.S. public transit for transgender and nonbinary people would be to shift social norms so that harassment is not acceptable because all people carry an inherent value worthy of respect as human beings. Unfortunately, this is not a short-term solution, as social norms cannot change overnight. Such change would require a shift in the tenor of public discourse away from debating whether and to what extent trans people deserve to have their human rights upheld. Such change would benefit from critical thinking and action pertaining to systemic privilege and oppression overall. As Quince explained in their survey response, “How do you effect systemic change? Transit is just one facet to a much larger problem.”

Research changes.

Researchers need to change our approach to using gender assumptions. As bell hooks already pointed out, the “imperialist white supremacist capitalist cis-hetero patriarchy,” undergirds our social norms and threads through our daily experiences (The New School, 2014). Following Black feminist theory, we should look to the marginalized to identify and understand the norms at play (Collins, 2002). From a practical standpoint, people who experience a phenomenon (such as harassment) are ones better able to identify it, propose interventions, and take action (Milani & Carbajal, 2023). This study reframed transit experiences by centering gender nonconformity, rather than merely extending women-focused approaches. In doing so, it further supported queer Black feminist theory that identified the need to structure our research questions and instruments with a lens from marginalized people to highlight how institutional power dynamics play out on the individual level in public spaces. For trans and nonbinary people particularly, we have quite literally moved through the world in different ways.

To understand the insights available through thinking gender differently, researchers must overcome institutional and cultural barriers. As a most basic example, surveys need more than binary gender options (Westbrook & Saperstein, 2015). This requires theorizing questions, collecting data, analyzing data, and applying findings differently (Lindqvist et al., 2021). Each of those steps intersects with institutions throughout the process, requiring institutional leeway from state laws that mandate legal genders and handling thereof (Trans Legislation Tracker, 2026); to university review boards that scrutinize survey questions (Adams et al., 2017); to conference presentation committees that assess relevance to the field (Gregor et al., 2023); to journal requirements that require robust methodology (Wu et al., 2024); to practitioner reports and resource guides that select top takeaways and more (Jahan et al., 2025). None of these institutions currently require expansive understanding of gender in what they support; many dismiss, degrade, or ban gender outside the binary. Culturally, the existence and meaning of trans and nonbinary people is caught in the crossfire of US politics and power with measurable

negative impacts on wellbeing (Greytak, 2024). All of which is unsurprising given the histories that gave rise to queer Black feminist theory. All of which requires continual action to move society beyond the violences of white supremacy.

CONCLUSION

In this study, I sought to better understand the US public transit experiences of transgender and nonbinary people. In brief, I found that trans and nonbinary people experience more harassment in the public spaces of transit than our cisgender counterparts, in addition to standard concerns around scheduling and convenience. As expected, based on prior transportation and queer Black feminist theory, other individual characteristics mattered in those experiences. Though the sampling method and sample size prevented most statistical analyses, the survey results indicated that transgender and nonbinary riders of color likely experience harassment more than white riders. Factors such as age, appearance, and visible conformance could not be assessed statistically. Yet, the interviews uncovered concerns about whether bystanders would intervene due to assumptions around gender and body type. Particularly poignant, the interviews revealed how trans and nonbinary people think through and consider how other people interpret them, their gender, and their humanity as whether they deserve to be harassed or aided when someone harasses them. The negative experiences lead to different public transit use in ways that limit transgender and nonbinary mobility by people from changing travel plans up through avoiding some trips altogether.

The violence of people and systems against trans and nonbinary people in public transit spaces limits the free movement and harms the wellbeing of trans and nonbinary people.

The results were not surprising. For decades, Black feminist theory, especially from queer Black feminists, offered a theoretical framework and lens to understand the ways in which white supremacy enforces social hierarchy in public spaces. At an infrastructure level, transit systems designed for able-bodied white cisgender hetero managerial-class men do not meet the scheduling and convenience needs of everyone else, i.e. the majority—all people of color and white disabled, nonbinary, trans gender, cis women, queer, working class, nonworking, underage, or retirement age people. Prior travel research already established that fact; this

study aligns with those findings. The public spaces of US transit systems create times in spaces where people assert social norms and vie for social position—often through harassment of those deemed and made vulnerable. Prior travel and public space research already established that fact when it comes to harassing women overall. This study shows that gender minorities experience even greater rates of harassment in transit spaces.

When we center the experiences and concerns of transgender and nonbinary transit riders, we gain perspectives and depths of understanding of social values—those embedded in infrastructure and policy (failures) to support the free movement of people and those displayed in social norms (of degradation) to put people in their place. Individuals can share how their experiences of spaces changed if/as their gender expressions changed. We come in every possible visible expression of gender. Though the obvious lens trans and nonbinary people offer is gender expression, we also embody every other type of social category, such as disability, race, ethnicity, document status, income class, family structure—all of which intersect with gender. By further researching with gender minorities to identify variances in behaviors toward them as correlated (or not) with variances from the white supremacist ideal human of a particular type of white man, we stand to gain a fuller picture of what social values policies support in action.

This study identified interventions for infrastructure, policy, and research practices and possibilities as recommended by participants and backed by prior evidence. Increased transit service—in route networks, frequency, and span—would increase the mobility options of trans and nonbinary riders while decreasing the time spent walking to or waiting for transit. Improved transit environments with better lighting, more seating, frequent cleaning, and unarmed transit authority presence would increase feelings of safety. Shifting social norms by training all staff and communicating to all riders to not accept harassment, particularly gendered harassment; to recognize gendered harassment; and to intervene effectively would help trans and nonbinary people feel safer in transit spaces. Improving the institutional research apparatus, particularly for

transportation, to recognize the importance of and advance research with trans and nonbinary people would highlight the possibilities to make improvements for even the most marginalized parts of society.

None of the recommended improvements would benefit only trans and nonbinary riders. All riders benefit when transit service increases, transit environments become more welcoming and feel safer, and hierarchy harassment veiled in binary gender norms decreases. The amount of that benefit varies for different social groups. In theory, the marginal benefit would accrue most to people experiencing the most marginalization from current levels of transit service, transit environments, and harassment; evaluating exactly what changes benefit whom the most in practice should be part of improving the institutional research apparatus.

In conclusion, the experiences of transgender and nonbinary people on public transit in the U.S. put the negative aspects of US transit in high relief—from basic lack of service through to incredibly high instances and severity of harassment and assault. Fortunately, it turns out that transgender and nonbinary people want the same things from transit as the majority of their cisgender counterparts—to get where they need to go, when they need to go there, and in a reasonable amount of time without risking their wellbeing and lives. While addressing the needs of the most marginalized people benefits the more privileged in this case, trans and nonbinary people deserve to get where we need to go when we need to go there without harassment simply because we are people.

APPENDIX A: Summer 2019 Pilot Study Interview Instrument

Question or statement listed first.

Related prompts listed second.

How old are you?

How often do you take public transit?

What is your racial or ethnic identity?

What is your gender identity?

What is your gender expression?

Describe the fluidity or stability of your gender expression.

Describe your impression of other people's perception of your gender.

Tell me your experiences with public transit.

Why do you take public transit?

Describe a typical experience with public transit.

Times of day? Times of week? Mode to transit? Transit mode(s)? Transfers?

What emotions, if any, do you feel when taking public transit?

Describe your best experience with public transit.

Describe your worst experience with public transit.

Describe traveling with other people, friends or family, on public transit.

If your gender expression has changed since you started taking public transit, describe the similarities and differences of your transit experiences.

What else should I be asking about experiences with public transit?

What else should I be asking about the influence of gender perceptions when taking public transit?

APPENDIX B: Recruitment Statement

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

Tamara “Tam” J. Guy, doctoral student, from the department of Urban Planning at the University of California, Los Angeles (UCLA) is conducting their dissertation research study chaired by Anastasia Loukaitou-Sideris.

Text of recruitment post (via social media):

I am researching transit experiences of people who are trans. If you ride or have ridden transit at least once a week, identify as trans, + would take a brief survey about your transit experiences, please click here [link].

Direct message reply to their direct message:

Thank you for expressing your interest!

Please see the attached consent form for details about the study. The answers to your questions are probably in the form. To answer your questions directly...

[insert answers to their questions, copy/pasted from the consent form].

It's completely voluntary and you can stop at any time. Please let me know if you're still interested in participating in the study. If so, we can find a time and place to meet, arrange a time to video chat, or speak on the phone—whichever best works for you.

Kind regards,

Tam

Once I recruit enough participants, a reply post to my original post (via social media):

Thank you to those who expressed interest! Gracious volunteers maxed out the study.

APPENDIX C: Online Consent to Participate in Research

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

Tamara “Tam” J. Guy, doctoral student, from the department of Urban Planning at the University of California, Los Angeles (UCLA) is conducting their dissertation research study chaired by Anastasia Loukaitou-Sideris.

You are eligible to participate in this research if:

1. You take or have taken public transit in the past; and
2. You hold a trans identity. Trans identities include, but are not limited to, transgender, two-spirit, nonbinary, genderqueer, genderfluid, pangender, agender, bi-gender, third gender, and/or gender non-conforming.

Your participation in this research study is voluntary.

Why is this study being done?

The purpose of this study is to better understand the public transit experiences of trans people.

What will happen if I take part in this research study?

If you volunteer to participate in this study, the researcher will ask you to do the following:

- Complete a survey of questions related to transit experiences, gender identity, gender expression, sexuality, race/ethnicity, and age.

How long will I be in the research study?

Participation will take a total of about 10 minutes for the survey.

Are there any potential risks or discomforts that I can expect from this study?

The risks, discomforts, and inconveniences of participating in this study are low.

One risk is the potential for emotional discomfort arising from traumatic experiences with taking public transit.

Resources to contact if the interviewee experiences severe discomfort are:

- Los Angeles Gender Center (for an appointment): 310-475-8880
- Trans Lifeline: 1-877-565-8860
- Trevor Project (LGBTQ youth, aged <25): 1-866-488-7386

Are there any potential benefits if I participate?

You will not directly benefit from your participation in the research.

The results of the research may inform the policies, processes, and design of public transit to better suit the needs of people who are trans.

Will information about me and my participation be kept confidential?

Any information that is obtained in connection with this study and that can identify you will remain confidential. It will be disclosed only with your permission or as required by law.

Confidentiality will be maintained by means of password/passcode protected storage devices for the electronic data (audio recordings) and no identifying information will be included on notes and documents. Your data, including de-identified data may be kept for use in future research.

The data from this study may be used in future studies involving Tam J. Guy to understand the public transit experiences of people who are trans.

What are my rights if I take part in this study?

- You can choose whether or not you want to be in this study, and you may withdraw your consent and discontinue participation at any time.
- Whatever decision you make, there will be no penalty to you, and no loss of benefits to which you were otherwise entitled.
- You may refuse to answer any questions that you do not want to answer and still remain in the study.
- You will be able to review, edit, and erase the tapes/recordings of your research participation if you wish to do so.

Who can I contact if I have questions about this study?

If you have any questions, comments or concerns about the research, please contact:

Primary contact: Tam J. Guy at (323) 649-5727 or tamjguy@ucla.edu

UCLA Office of the Human Research Protection Program (OHRPP):

If you have questions about your rights as a research subject, or you have concerns or suggestions and you want to talk to someone other than the researchers, you may contact the UCLA OHRPP by phone: (310) 206-2040; by email: participants@research.ucla.edu or by mail: Box 951406, Los Angeles, CA 90095-1406.

To keep a copy of this information to keep for your records click here [\[INSERT LINK\]](#).

APPENDIX D: Online Survey Instrument

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

In this survey, we would like to ask you to share your public transit experiences, considering your full journey via public transit, including from where you leave to the wait at the transit stop to the transit ride itself and from where you get off the transit vehicle to your final destination.

1) Have you used public transit (BUS or TRAIN) now or in the past?

- a. YES
- b. NO

2) Do you currently take public transit, such as a bus or train, in a typical week?

- a. YES
- b. NO

3) Please list the reasons that make you avoid using public transit more often, starting with the most important. (short answer)

4) How often do (or did) you take public transit in a typical week?

- a. Almost every day
- b. 4-5 times per week
- c. 2-3 times per week
- d. A few times per month

- e. Rarely (less than once per month)
- f. Never

PERSONAL CHARACTERISTICS

5) Please indicate your age (select one):

- 18-29
- 30-39
- 40-49
- 50-59
- 60+

6) Please indicate your race/ethnicity (check all that apply)

- White/Caucasian
- Black/African American
- Latino
- Asian/Pacific Islander
- American Indian
- Mixed Race
- Other (list)

7) Are you heterosexual?

- Yes
- No
- Don't know/don't wish to answer

8) What is your gender?

- Man
- Woman
- Non-binary, please self-describe: (short answer)

9) Are you transgender?

- Yes
- No

10) Please describe your gender expression. (short answer)

11) How do you think other people perceive of your gender and gender expression? (short answer)

12) To what extent do you think your gender expression tends to conform to what other people expect based on their assumptions about your gender? (Always Often Sometimes Rarely Never Inapplicable)

TRANSIT EXPERIENCES

We will now ask some questions about your transit experiences. If you wish to answer these questions about your transit experiences in more than one town, city, or metropolitan area, please check this box. (check box, prompts questions for each area)

13) Please indicate the place you have in mind when answering the following survey questions.

City:

State:

Zip code (if you know it)

14) Do you feel safe when using the BUS during daytime? (AOSRNI)

15) Do you feel safe walking to or waiting at the BUS stop during daytime? (AOSRNI)

16) Do you feel safe when using the BUS after dark? (AOSRNI)

17) Do you feel safe walking to or waiting at the BUS stop after dark? (AOSRNI)

18) Have you experienced harassment while traveling on the BUS? (AOSRNI)

19) Have you experienced harassment while heading to/from the BUS? (AOSRNI)

20) Have you experienced harassment while waiting for the BUS? (AOSRNI)

21) If you have been harassed while traveling on, heading to/from, or waiting for the BUS, please describe the harassment. (select: N/A or short answer)

22) Do you feel safe when using the TRAIN during daytime? (AOSRNI)

23) Do you feel safe walking to or waiting at the TRAIN stop during daytime? (AOSRNI)

24) Do you feel safe when using the TRAIN after dark? (AOSRNI)

25) Do you feel safe walking to or waiting at the TRAIN stop after dark? (AOSRNI)

26) Have you experienced harassment while traveling on the TRAIN? (AOSRNI)

27) Have you experienced harassment while heading to/from the TRAIN? (AOSRNI)

28) Have you experienced harassment while waiting for the TRAIN? (AOSRNI)

29) If you have been harassed while traveling on, heading to/from, or waiting for the TRAIN, please describe the harassment. (select: N/A or short answer)

30) What are some strategies that would help you feel safer in transit environments? (short answer)

(If they checked the box for multiple areas in question #3, then 31) Would you like to share your experiences regarding another town, city, or metropolitan area? Yes/No, "yes" prompts another round of questions from #4 onwards, "no" ends the survey.)

Thank you for taking this survey to improve our understanding of trans experiences.

If you would be willing to speak with the researcher about your experiences of taking transit, please provide your preferred contact information here: (blank entry space)

APPENDIX E: Survey Follow-up for Interview Recruitment Statement

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

Tamara “Tam” J. Guy, doctoral student, from the department of Urban Planning at the University of California, Los Angeles (UCLA) is conducting their dissertation research study chaired by Anastasia Loukaitou-Sideris.

Text of recruitment post (via social media):

I am researching transit experiences of people who are trans. If you ride or have ridden transit at least once a week, identify as trans, + would speak with me over an initial interview and a potential follow-up interview, please send me a direct message for more information.

Direct message reply to their direct message:

Thank you for expressing your interest!

If you would speak with me over an initial interview and a follow-up interview, please see the attached consent form for details about the study. The answers to your questions are probably in the form. To answer your questions directly...

[insert answers to their questions, copy/pasted from the consent form].

It's completely voluntary and you can stop at any time. Please let me know if you're still interested in participating in the study. If so, we can find a time and place to meet, arrange a time to video chat, or speak on the phone—whichever best works for you.

Kind regards,

Tam

APPENDIX F: Oral Consent to Participate in Research

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

Tamara “Tam” J. Guy, doctoral student, from the department of Urban Planning at the University of California, Los Angeles (UCLA) is conducting their dissertation research study chaired by Anastasia Loukaitou-Sideris.

You were selected as a possible participant in this study because you take or have taken public transit at least once per week on average and hold a trans identity. Trans identities include, but are not limited to, transgender, two-spirit, nonbinary, genderqueer, genderfluid, pangender, agender, bi-gender, third gender, and/or gender non-conforming. Your participation in this research study is voluntary.

Why is this study being done?

The purpose of this study is to better understand the public transit experiences of trans people.

What will happen if I take part in this research study?

If you volunteer to participate in this study, the researcher will ask you to do the following:

- Participate in one initial semi-structured and possibly one follow-up unstructured in-depth audio recorded interviews, arranged via email or social media direct message.
- The initial interview is estimated to take between 45 minutes to 1 hour.
- The potential follow-up interview is estimated to take between 30 to 45 minutes.

- Each interview will take place at a location and time as convenient for the interviewee, either in-person or over a video call.
- Interview questions will cover aspects of gender and taking public transit, such as describing why a person chooses to take transit, how they navigate taking transit, and a positive experience with transit.

How long will I be in the research study?

Participation will take a total of about 1.25 to 2.75 hours in total over 1-3 weeks.

Are there any potential risks or discomforts that I can expect from this study?

The risks, discomforts, and inconveniences of participating in this study are low.

One risk is the potential for emotional discomfort arising from traumatic experiences with taking public transit.

Resources to contact if the interviewee experiences severe discomfort are:

- Los Angeles Gender Center (for an appointment): 310-475-8880
- Trans Lifeline: 1-877-565-8860
- Trevor Project (LGBTQ youth, aged <25): 1-866-488-7386

Are there any potential benefits if I participate?

You will not directly benefit from your participation in the research.

The results of the research may inform the policies, processes, and design of public transit to better suit the needs of people who are trans.

Will information about me and my participation be kept confidential?

Any information that is obtained in connection with this study and that can identify you will remain confidential. It will be disclosed only with your permission or as required by law.

Confidentiality will be maintained by means of password/passcode protected storage devices for the electronic data (audio recordings) and no identifying information will be included on notes and documents. The data from this study may be used in future studies involving Tam J. Guy to understand the public transit experiences of people who are trans.

What are my rights if I take part in this study?

- You can choose whether or not you want to be in this study, and you may withdraw your consent and discontinue participation at any time.
- Whatever decision you make, there will be no penalty to you, and no loss of benefits to which you were otherwise entitled.
- You may refuse to answer any questions that you do not want to answer and still remain in the study.
- You will be able to review, edit, and erase the tapes/recordings of your research participation if you wish to do so.

Who can I contact if I have questions about this study?

If you have any questions, comments or concerns about the research, please contact:

Primary contact: Tam J. Guy at (323) 649-5727 or tamjguy@ucla.edu

Dissertation Chair: Anastasia Loukaitou-Sideris at sideris@ucla.edu

UCLA Office of the Human Research Protection Program (OHRPP):

If you have questions about your rights as a research subject, or you have concerns or suggestions and you want to talk to someone other than the researchers, you may contact the UCLA OHRPP by phone: (310) 206-2040; by email: participants@research.ucla.edu or by mail: Box 951406, Los Angeles, CA 90095-1406.

You will be given a copy of this information to keep for your records.

APPENDIX G: Semi-structured Interview Instrument

Trans on Transit: The mobility & public transit experiences of transgender & nonbinary people

Question or statement listed first.

Related prompts listed second.

1. If you take public transit, how often do you take public transit?
 - a. Times of day? Times of week? Mode to transit? Transit mode(s)? Transfers?
2. Why do you take public transit? If not, why not?
3. To confirm, what is your racial or ethnic identity?
4. To confirm, what is your gender identity?
5. To more fully understand your survey answer, what is your gender expression?
 - a. Describe the fluidity or stability of your gender expression.
 - b. Describe your impression of other people's perception of your gender.
 - i. How does their perception of you fit their ideas about gender?
 - ii. How does their perception of you challenge their ideas about gender?
6. Tell me about your experiences with public transit.
 - a. (Prompt if needed: Describe a typical experience with public transit.)
 - b. What emotions, if any, do you typically feel when taking public transit?
 - c. Describe your best experience with public transit.
 - d. Describe your worst experience with public transit.
 - i. (Prompt if needed: Describe your experience with transit harassment.)
 - e. Describe traveling with other people, friends or family, on public transit.

7. (Prompt if needed:) If someone was meeting you for the first time in person at a train station, how would you describe your height and body composition?
8. If your gender expression has changed since you started taking public transit, describe...
 - a. the similarities...
 - b. and differences of your transit experiences.
9. Do you think that your gender expression affects your transit experiences? In what ways?
10. What else would you like to tell share about your experiences of gender and transit?
11. When would be a good time in the next 2-3 weeks for a half-hour follow-up interview?

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