

University of Mary Washington

**Eagle Scholar**

---

Student Research Submissions

---

Spring 4-18-2023

## **Sex in the Cities: A Comparative Analysis of Vienna and The United States' Efforts in Gender Mainstreaming Transportation**

Sarah Miller

Follow this and additional works at: [https://scholar.umw.edu/student\\_research](https://scholar.umw.edu/student_research)



Part of the [Infrastructure Commons](#), [Public Policy Commons](#), [Transportation Commons](#), [Urban Studies Commons](#), [Urban Studies and Planning Commons](#), and the [Women's Studies Commons](#)

---

### **Recommended Citation**

Miller, Sarah, "Sex in the Cities: A Comparative Analysis of Vienna and The United States' Efforts in Gender Mainstreaming Transportation" (2023). *Student Research Submissions*. 540.

[https://scholar.umw.edu/student\\_research/540](https://scholar.umw.edu/student_research/540)

This Honors Project is brought to you for free and open access by Eagle Scholar. It has been accepted for inclusion in Student Research Submissions by an authorized administrator of Eagle Scholar. For more information, please contact [archives@umw.edu](mailto:archives@umw.edu).

**Sex in the Cities: A Comparative Analysis of Vienna and The United States' Efforts in  
Gender Mainstreaming Transportation**

Sarah Miller  
PSCI 491H: Individual Study  
April 13, 2023

## Introduction

An overwhelming majority of Americans – 83%, to be exact – live in urban areas (“U.S. Cities Factsheet” 2022). However, many groups living within cities are not represented adequately in urban design and policy. Women, for example, experience the urban environment differently than men. Despite making up over half the American population, women’s interests are too often overlooked by urban infrastructure. Historically, cities were designed by men to serve their needs because they claimed the space to be theirs (Kern 2021). As men and women interact with the city in vastly different ways; there has been more of a push, recently, to represent women’s needs in urban planning. This concept is a more modern perspective of design than what has been seen in the historical construct of cities. These different experiences between men and women have inspired many movements such as “Right to The City”, which aims to combat the patriarchal design of cities to make women feel more included and less violated when in urban environments (“Women's Right to the City Manifesto” 2022). This movement is tailored to general social change and not to a specific component of the city. However, certain areas of urban planning negatively impact women and could be adapted to be more gender equal.

In the United States, cities are designed via Euclidean Zoning— a method of zoning that designs different areas to serve different uses (“The Problems with Euclidean Zoning” 2018). Areas are designated for residential, commercial, business, and industrial zones. Designing cities in this manner creates organized zones, but it also increases the need for transportation, such as cars or public transportation. This has created car culture popularity in the United States; car culture is a manifestation of masculinity, due to how it is marketed toward the public. This is why men are more likely than women to own cars, meaning that women are more likely to be reliant on public transportation as a method of moving around.

Women's reliance on public transportation binds them with the limitations that accompany this mode of transportation.

Relying on public transportation can negatively impact a user's economic independence, specifically women, for multiple reasons. The first limitation is that because they are at the mercy of the public transportation lines and areas, public transportation users are constrained to certain living situations and job positions in which they may be unfulfilled. Furthermore, they cannot take other, possibly higher-paying jobs for which they are better qualified due to the number of working hours and commute. More specifically, women are often tentative about public transportation because it can be a hostile environment for them. These transit areas and transit systems are common places in which people, specifically women, are sexually harassed, threatened, and even attacked. Even if women are not attacked, public transportation areas also produce anxiety in women because the fear of being attacked or harassed is ever present (Kern 2021). Women frequently create personal maps of "safe areas" and "safe hours" to remedy this, which can limit where they go and when (Kern 2021). These threats then constrain where women can get jobs, the hours they can work at these jobs, and where they can live. To reduce their chances of being attacked or harassed, women are less likely to work later hours, which in turn impacts where and how long women work at their jobs each day. This phenomenon between public transportation and women is a vicious cycle in which women are constantly, negatively influenced in many aspects of their lives. The cyclical nature of these incidents shows how disadvantaged women are in urban areas due to their reliance on public transportation and the negative impacts of public transportation on them.

Despite ample data showing how these issues negatively impact women, there are no systems in place or effective policies in U.S. cities actively working to address these problems for women. Western European cities, most notably Vienna, Austria, have taken

these issues seriously and created provisions to account for this gender gap. The United States, however, has done little to implement change on a broad scale. Possibly, the United States could make cities more equitable by implementing policies resembling those of Vienna.

In the United States, there is a severe lack of progress in policy to tackle these transportation problems. Most of the issues discussed have not been rectified at any level of government in this country. The one potential exception is a bill, H.R.5706— the Stop Sexual Assault and Harassment in Transportation Act— recently passed by the House of Representatives and awaiting confirmation in the Senate. This bill deals with sexual assault on public transit (Marcos 2022) and would have the Department of Transportation collect data about the number of sexual misconduct incidents, which would then be reported to the public (Marcos 2022). It would also require certain transportation methods such as airlines, taxis, and buses to implement formal policies that prohibit sexual misconduct (Marcos 2022). The proposal of the Stop Sexual Assault and Harassment in Transportation Act bill is considered a big win for activist groups and women, but it does little to address the root causes of gender inequality in urban transportation. The bill is more focused on reporting than action and does nothing to deal with the issues while they are happening, only after the fact. Creating policy offers an avenue to focus on how the infrastructure of transportation can decrease harassment and violence with more permanent results.

Outside of this new policy being potentially implemented, there are no other significant federal policies in place. Statistics and evidence indicate the need for change, but nothing is being done. In a study conducted by Metro Magazine which focused on college students, a cohort that tends to rely heavily on public transportation, around 63% of participants reported sexual harassment (Loukaitou-Sideris and Weinstein Agrawal 2020). Out of this sample, most of those who reported harassment were women and women

experienced harassment twice as often as men (Loukaitou-Sideris and Weinstein Agrawal 2020). The D.C. Metro areas, and other U.S. cities, would benefit from the development of a policy that could be an effective tool to deal with gender gap issues, such as transportation and housing.

Vienna, in contrast, has made it its mission to overcome this gender gap. In the 1990s, Vienna made strides in creating a gender-equal city, and in 1991, city planners, who were women, created an exhibit called “Who owns public space—women’s everyday life in the city” (Bauer 2022). The purpose of the exhibit was to increase the visibility of the experiential differences between men and women in cities. Since this first exhibit, there have been additional exhibits, surveys, and studies created to spread awareness and better inform city planners (Bauer 2022). In 1992, the Vienna government created The Women’s Department which focused its effort on studies to better understand the issues women face along with other resources like counseling (Bauer 2022).

Transportation has been an important component of the Vienna initiative to achieve a gender-equal city. In 1999, Vienna surveyed transportation habits (Kern 2021). The survey found that women were more reliant on public transportation, but they also struggled with the infrastructure’s design (Kern 2021). The survey showed discrepancies in how men and women interact with aspects of the city, such as sidewalks, which were found to be ineffective for women. This was because the sidewalks were too narrow for women if they had strollers or bags, and this forced them to be closer to strangers increasing their anxiety. Vienna took this feedback from this survey and redesigned parts of the city and created pilot projects (Kern 2021). This survey approach utilized by Vienna prioritizes gender mainstreaming in urban areas (Kern 2021). Gender mainstreaming is a method of creating policies, programs, and projects to make more equitable spaces for men and women. Increasing an individual's mobility acts as a “prerequisite for self-determined and equal

participation in public life” (Ludwig 2019). Therefore, if access to public transportation is increased, then an individual’s ability to be more mobile also increases and can improve other aspects of their life. Examples of these improvements can be job security, childcare, access to healthcare, and more. Women tend to face more hardships when using public transportation and they also tend to avoid it—an example is only traveling during specific hours of the day—but these avoidance methods decrease their chance of physical and social mobility.

U.S. cities public transit options and the Viennese transportation systems exist in different cultures and governments; however, individuals who have experienced using both found that there is one that outranks the other (Millar 2023). Based on interview statements, the Vienna transportation system seems cleaner, safer, and more punctual than D.C. Metro System and other American systems (Millar 2023). Based on personal accounts, these individuals found that they faced less harassment and felt more comfortable while on Viennese transportation as opposed to the systems in the United States.

This research aims to bridge the gender gap in U.S. cities by comparing the Viennese system to U.S. cities such as Washington, D.C. Background information has shown that this problem is prevalent, but despite the need, minimal change has been done. Analyzing the previous research on sexual harassment and economic burden displays the need for change. Comparing the flaws of the U.S. systems to a system that has been successful at gender mainstreaming like Vienna shows the possible steps that can be taken to create gender-equitable transportation in the United States.

## **Methodology**

Deciding to research the topic of transportation revealed the need to create a comparative essay between Vienna and the United States to show the discrepancies in the U.S. systems. There has been important previous literature on this topic that has focused on the Viennese reforms. However, no previous paper had compared the situations of

progressive European cities on this issue to the lack of action in U.S. cities and sought to explain the differences. Researching topics, such as gender mainstreaming in transportation, entails implementing qualitative research techniques. In the case of this topic, the best action was to conduct interviews. Interviews allow for different perspectives that exist at all levels—personal, governmental, and organizational—to be analyzed to best understand the issues at hand. The intent and goal were to reach out to individuals and institutions to understand multiple perspectives surrounding the issue of gender inequality in transportation. However, before this, preliminary research was conducted to understand what sectors should be contacted for interviews. The research showed the need for a comparative analysis between the United States and Vienna, Austria. Also, the research helped show the need for governmental action and the over-reliance on non-profits, which is how these contacts were determined for possible interviews. The personal experiences that were documented and discussed by individual interviewees also aided in supporting the research but gave the topic a face; meaning that it took theoretical issues and situations and put them into real-life circumstances.

These people questioned for the personal interviews, the ones regarding the female perspective of transportation in Vienna compared to the United States, needed experience with both Viennese and domestic systems. Luckily, the University of Mary Washington has a popular study abroad program. This program had students who lived in Vienna for a considerable amount of time, more than two months, and are familiar with the U.S. public transit system. Margaret Millar, a student from the University of Mary Washington, was the initial interviewee who then recommended other women whom she met while studying abroad. This snowball method of finding interviewees was effective in finding women who lived in the U.S. but also in Vienna for three to four months. These women were Madison Argitis, Mikaela Zelinger, and Michelle Fanelli, all of whom had experience with both the



U.S. transit system and the Viennese system. All of these women were interviewed via a video conferencing platform, and all consented to have their names used in the study.

However, all of these women were in their early twenties, which means other age groups of women are not as represented in this interview sample. Other individuals who work for nonprofits that advocate eliminating harassment on streets and public transportation were also contacted. Governmental organizations and departments in Vienna, Austria, and multiple U.S. cities—Richmond and D.C.—were additionally contacted for their perspectives.

These people were all contacted via email, but some never responded. Nonprofits did not respond, despite the multiple attempts that were made. This was unfortunate because their perspective would have been an interesting point to add to this research. The governmental institution in Vienna was very accommodating. They provided information and contact to Eva Kail, who is a very big figure in the world of gender mainstreaming. However, cities within the United States were less helpful. Richmond eventually answered but was uncooperative. Washington, D.C. was unresponsive despite multiple departments being contacted via emails and phone calls. This experience was very reflective of each city's priorities.

Comparing the two cities, Vienna made it an important part of its agenda to be responsive to comments and questions. When contacting the city, it is very easy to get in touch with different departments, and even if one department cannot help, they will redirect you to someone who can. In comparison, Washington, D.C., the United States capital, is not informative. Unlike the Viennese offices, the D.C. departments would never answer or give automated responses that were not helpful. The ramification of this small thing is that citizens feel ignored and underappreciated. Also, for this study, the lack of perspective from a city in the United States takes away from the background information and validity. The Viennese government, however, responded promptly and produced non-automated responses that make

users feel respected and cared for, even if they are not a citizen of Austria. This distinction shows the city's priorities, but it would have been best to understand the U.S. governmental perspective. However, first-hand accounts from the interviewees did help to show the public opinion of women.

The interviews held were transcribed and notes were taken during the interview for the current investigation. This method of cataloging allowed for proper consideration and time to give to each individual's responses and perspective. For individuals like Eva Kail, who did not have video conferencing interviews, responses were collected via email. They were then transferred to a secure drive. The interviews were then used in conjunction with preexisting research to better understand these phenomena from firsthand accounts. The interview responses also helped bring to light certain issues that had not been considered in the pre-existing research. These components are why such interviews are so important for qualitative analysis in studies.

## **Transportation**

There are multiple reasons individuals might fear public transportation, but the most prominent group that faces anxiety is women (Ludwig 2019). Public transportation or transit areas, such as parking garages, are perceived as dangerous to women. These fears then influence women's behavior in their everyday lives. Women will avoid traveling to certain areas or at certain times because of fear of sexual harassment, assault, or other forms of violence (Anderson 2016). The reliance on public transportation compounded with the fear of transit environments also plays into the economic burden women face. Women, especially those of lower income, must adapt their schedules around safety, work, and public transportation. It would be in these cities' interests to increase transportation networks and usage across all hours because it would improve the revenue public transportation stimulates.

Moreover, women—unlike men—make up most of the country's unpaid labor. Unpaid labor is work such as childcare or taking care of an elderly family member. This impacts women's economic status in multiple ways, such as working fewer hours in paid jobs and having to trip chain on public transportation. Trip chaining is the process of changing lines on metros or buses in one ride to get to the desired locations or stops. Trip chaining is frequently necessary due to the design of U.S. cities which are designed with zoning areas based on use. This issue is exacerbated by housing locations being isolated from commercial areas, causing a reliance on transportation to go to the doctors, grocery store, post service, etc. Cities have failed, “to provide women with reliable, convenient, safe, and affordable transportation . . . [and] reduce the economic opportunities of women and negatively impact their quality of life,” (Ludwig 2019). Improving transportation can improve multiple facets of a woman's life.

The United States and Vienna are comparatively different due to multiple reasons, and this is best seen when analyzing the locations comparatively. Each has unique tactics for dealing with the city's ideological perspectives, design and housing, sexual harassment and assault, and the economic burden of women. These categories play into the transportation issues in the United States and how we can improve standards.

### **The United States**

The United States tends to be behind many countries despite priding itself on being a country for the people. Transportation is no different. The U.S. has been lacking in its response to dealing with the gender issue on transportation, even broadly within cities. Some cities have taken small actions, and the lack of governmental response has spurred grassroots activism to fill in the gaps that are left by this government's inaction.

### *Ideology*

The United States has been a country focused on individual rights since its inception and that pattern continues. This is seen with the focus on fundamental rights and protections of speech, religion, bearing arms, assembly, and petitions (“The 1st Amendment of the U.S. Constitution” 2022). The United States is very focused on personal rights and freedoms but lacks actions when it comes to working toward communal reform. This focus on individuals and not on groups is why action in developing gender equality is still ongoing and slow. Despite this ingrained cultural obstacle, many activists have used a bottom-up approach to create change. In 1972, The United States attempted to pass legislation on gender equality through the Equal Rights Amendment, also known as the ERA, but it was never ratified. Recently, however, there has been a resurgence of support for the ERA due to events such as the “Me Too” movement (Cohen and Codrington 2020). This relates to the transportation argument because it explains how the U.S. has always been slow to enact change that aids a particular community; in this case, women and women of color, to be more specific. Furthermore, the U.S.’s individualistic perspective on society means that issues involving communities are not prioritized, which is why welfare projects and infrastructure money are harder to pass federally.

One of the reasons why transportation reform is so difficult in the United States is that the political structure gives a disproportionate amount of power to rural areas compared to urban areas. Unlike urban regions, rural areas have little to no access to public transportation. This is important to how public transportation is conducted on a national scale because the rural population does not understand what money is spent on transportation infrastructure. The structure of the United States government gives power to the rural areas and states. This has been seen in the electoral votes given to these states (Badger 2016). In 2016, Hillary Clinton won the popular vote amongst the U.S. population, but former President Trump won

the electoral college (Badger 2016). In part, this was due to the rural vote because of the way votes are distributed. A similar power has been seen in the House of Representatives (Badger 2016). The cluster impact of urban areas lessens the number of Democrats in the House, but the spread of rural areas increases representatives, and these constituents tend to lean Republican (Badger 2016). This provides the Republican party with “their cushion” (Badger 2016). Voting distribution matters because Republicans are more likely to support highway projects over public transit projects (Kapur 2021). In 2016, this was seen with the GOP proposing removing public transit from being funded by the Highway Trust Fund (Zanona 2016). This matters for public transportation infrastructure because urban areas like cities are usually more reliant on it than rural areas; based on voting behavior rural areas are Republican dominated and urban areas are Democratic heavy (Parker et al. 2018). Meaning, if the people in power answered to citizens by the size of the population, urban areas would be prioritized over rural citizens. This can account for little attention being put on gender-inclusive public transportation and urban infrastructure since the politicians do not represent these individuals in representative numbers. In contrast to the United States system—which has a state like California receiving the same number of Senators as Wyoming—Austria has proportional representation. This method of representation elects officials based on population views and not on regional biases. This system tends to create a government more to represent the people’s interests.

The payment design in transportation is meant to hold people accountable due to societal distrust of people in the United States. Within the transportation department, this lack of trust in individuals is seen in how the transportation system operates fare and ticket payment. It works by purchasing tickets or passes directly from machines and scanning them in. The system is meant to keep people accountable by scanning, swiping, or holding cards or tickets to pay for their fares. However, the systems are not always functioning or operating

well, which can delay people and infuriate riders. Also, the turnstiles can be nuisances to individuals who have bags or children with them. This sentiment was expressed by interviewee Margaret Millar who is familiar with both the D.C. Metro and Viennese systems (Millar 2023). Also, the D.C. transportation system, specifically the Metro is not as reliable and fast, which means if a rider misses a train, their plans can be delayed, impacting economic mobility (Millar 2023). Additionally, Millar expressed discontent about the D.C. Metro requiring most individuals to go through turnstiles. She found it to be burdensome and time-consuming (Millar 2023).

Additionally, the mentality surrounding transportation in the United States is stigmatized more than in other countries. According to Michelle Fanelli, public transportation within cities has a negative connotation associated with it and tends to discourage people from using these resources (Fanelli 2023). People tend to have negative associations with public transportation (Shrikant 2018). Usage of public transportation, “is often seen as only benefitting low-income populations, groups often ignored by government agencies” (Shrikant 2018). The ingrained societal stigma with public transit has perpetuated the lack of action and funding from governments. Since it is seen as an issue that impacts low-income groups, it is not worthy of being aided by the government. This in part is linked to the split mentality Americans have toward helping themselves versus receiving help from the government. A survey conducted in 2001 found that Americans are almost equally split on the reasons for poverty. In the survey, the question was, “Which is the bigger cause of poverty today: that people are not doing enough to help themselves out of poverty, or that circumstances beyond their control cause them to be poor?” (PBR 2002). Though this question was not directly related to transportation, it shows the mentality of Americans and why the government has been slow to act. Additionally, though public transit is highly stigmatized, certain modes of transportation are more vilified in comparison to others. The transportation mode that faces

the most negative sentiment is buses (Shrikant 2018). Interview respondents expressed feeling these different transportation pressures domestically, but while abroad felt very neutral and unbiased toward the different options (Millar & Fanelli 2023).

### *Urban Planning*

Euclidean zoning separates housing from other areas of the city, making people—specifically women—more reliant on public transportation. One of the main reasons that housing can be impactful to women is its location in reference to the city’s other resources. The best design style for women tends to be mixed-use design. The mixed-use areas combine residential areas with commercial areas, so people can access everything needed without significant commutes. Women would benefit from more mixed-use areas and styles of development since they tend to make up most of the unpaid labor. This means that they require multiple trips to accomplish all of their errands and tasks (“Supporting Active Living through Mixed-Use Developments” 2022). It allows for less trip-chaining, which would lessen the economic burden that women, specifically single mothers, face.

Housing is an important issue for women because of the difficulty of securing a home. Women, particularly women of color, frequently face what is called the “feminization of poverty” which negatively impacts their housing choices (“9.6f: The Feminization of Poverty” 2021). This is because women have lower incomes on average and tend to be rent-burdened, which limits their housing options and makes transportation more difficult to afford (“Gender & Housing in California” 2022). Rent-burden, as defined by the federal reserve, is when one spends “more than 30 percent of income on housing” (Larrimore and Schuetz 2017). Severe rent-burden is spending more than 50% of income on housing (Larrimore and Schuetz 2017). Single mothers experience a rent-burden more than fathers: 73% of mothers compared to 56% of fathers (“Gender & Housing in California” 2022). This

is compounded by the fact that after divorce, women are more likely to care for children, which results in them being worse off compared to men, who tend to improve financially (Okin 2007). These conditions mean that women are more likely to spend more of their income on housing making them rent-burdened or severely rent-burdened. The limitation of rent also limits where women can live as affordable housing is usually not centrally located and is distant from the city's center and business districts.

Therefore, economic strain can play a major role in limiting women's access to public transportation; where an individual lives determines what transportation they use. These conditions put women at a disadvantage that is then worsened by the design of cities being counterproductive to best serve them. United States cities are typically Euclidean design, meaning that women need to take multiple trips to complete all of the errands for which they are usually responsible. An example is taking multiple trips from work to pick children up and then going to the store. Since neighborhoods in American systems are not mixed design, individuals have to take trips to different areas to receive different goods. This issue of having to take multiple trips is aggravated by the American dependency on and prioritization of cars.

#### *A) Car Culture*

The United States is a society dominated by car use, which "exacerbates this problem by making it more difficult to complete errands by public transportation in a short amount of time" because little attention is given to transportation (McDonnel 2019). In the United States, car culture is explicitly gendered, which is why men are more likely to drive cars than women. This mentality is extended with the increase in car prices women face. Young women are often told that they should be accompanied by men so that they are not taken advantage of when purchasing cars and when taking vehicles in for repairs. This advice is valid and continues to be perpetuated by the auto industry. Statistically, it has been proven by



evidence showing that women are usually quoted higher prices by car dealers than men (Tengler 2021). This factor can disincentivize women from purchasing cars for personal treatment reasons and economic factors. Not having a car, in a society dictated by personal vehicles, means women are more reliant on public transportation, and the data supports this concept.

Correspondingly, these hardships between women and cars start much earlier in their lives. Teenage girls are more likely to be highly supervised and restricted when driving and using cars (Best 2006). Due to the gendered nature of car ownership, it makes sense that women might be more inclined to use public transportation than men, and the statistics support this idea. The economic aspect of purchasing cars, which has proven to be misogynistic, also discourages or stops women from owning cars.

According to U.S. Census data from 2019, women use public transportation more than men (“New Census Report Shows Public Transportation Commuters Concentrated in Large Metro Areas of the United States” 2021). Women tend to rely on public transportation more because they are less likely to access a personal vehicle. In 2021, it was found that out of all car owners, 54.93% were men as opposed to 35.43% of women who were car owners (“U.S. Car Owners by Gender 2021” 2022). However, it is important to note that African American women, especially those between the ages of 18-29, are the group that is most reliant on public transportation (Anderson 2016). These statistics explain how despite women’s reliance on public transportation, it is not designed for them or their needs. This furthermore indicates that they are most likely to be treated worst on public transportation than any other group. Overall, this makes no logical sense because though women are the largest users they are underrepresented compared to men.

*Economic burden*

Transportation and transit zones can be dangerous for women and create a sense of fear, but they can also cause an economic burden on women which disadvantages them. Women have “to forego 'extraneous' trips, which in turn reduces economic, educational or leisure opportunities,” (Loukaitou-Sideris 2014). This, augmented with the concept that women tend to rely on public transportation more than men, creates a double-edged sword for women. Women need transportation but must deal with harassment, which might limit their usage and lessen their economic opportunities. To add to women’s economic burden, women trip chain more than men. Creating transportation measures that do not charge for switching lines would aid women greatly; it would alleviate the economic disadvantage of trip chaining. Certain cities in the United States have done just that and removed the charge to transfer or trip chain. Post-COVID, many mayors are seeking to lessen the economic burden of paying for public transportation. For example, Boston’s mayor, Michelle Wu, filed to have three major bus routes be free to ride to increase ridership (Kashinsky and Synder 2022). However, the slow-moving movement has only impacted certain cities and routes.

To add to this economic issue, women account for most of the unpaid labor in the United States. This unpaid labor impacts their income because they have less time to spend at work, and they must make longer or alternative routes to run more errands. This leads to trip chaining because they must vary their route to drop their kids off, pick up groceries, stop by a relative’s house, or do any other errands. This puts them at a disadvantage that the United States transportation system exacerbates. Women have varied routes and responsibilities that lessen their ability to work longer hours than men. This then disadvantages their ability to move up or work full time on top of the economic burden of having to take multiple routes and limiting their hours on transit systems and/or areas. Trip chaining causes an economic burden as does unpaid labor; however, these two issues are not mutually exclusive. They interact with each other in conjunction with women’s fear of transit systems, which in turn

increases the economic burden on women as opposed to men, who generally do not face these issues.

The women interviewed, who have experience with transportation systems in the United States, found that the U.S. models tend to be more expensive when compared to Western European models, such as Vienna. Margaret Millar, a student at the University of Mary Washington who lives in Northern Virginia, stated that the metro system in D.C. is expensive if she has to take multiple trips and go through different routes (Millar 2023). According to the D.C. Metro website, if one were to purchase a one-month unlimited pass—granting them the ability not to be charged for every trip they take—it would cost around \$64 to \$192 (“Cost to Ride: WMATA” 2023). Therefore, if one does not have the means to purchase this pass but still needs to trip chain, they will face economic pressure; especially when traveling during high traffic hours.

### *Sexual Harassment and Assault*

According to a survey conducted by the Washington Metropolitan Transit Authority with the help of Stop Street Harassment and Collective Action for Safe Spaces, women are three times more likely to experience sexual harassment on public transportation, yet 77% never report these experiences (Chemaly 2017). However, despite women stating that they have been harassed, there are no statistics or databases to collectively report these crimes when they occur. It is estimated that public transportation is the second most common location where women face sexual harassment—the primary being on the street (Williams, Malik, and McTarnaghan 2020). This exemplifies that the fear women face in transit areas is evident and well-supported (“Global Mobility Report 2017” 2022).

Also, there is no place or forum for women to place reports about non-physical harassment such as verbal harassment like catcalling. Women then are not able to report

verbal harassment, and this skews data. In most states catcalling, which, is defined by Merriam-Webster, as, “the act of shouting harassing and often sexually suggestive, threatening, or derisive comments at someone publicly,” is completely legal. Two-thirds of women have reported being catcalled at some point, and this harassment instills fear in women that impacts when and how they travel (Thorne 2019). Women tend to adapt their behavior to deal with these unwanted advances because ignoring them can lead to escalations of violence. Though verbal harassment is not a physical assault, it can instill a sense of fear in women that leads them to intentionally avoid specific areas and times of travel. The fear women face in urban areas has often been discredited as female fear, but it has been proven to have an impact on where and how women travel (Kern 2022, 145). This fear exists in all parts of the city, including in transit areas, meaning that women will adapt their behavior to only go to specific areas at specific times. This limits where they can live, and where and when they can work which can impact their economic status. This cyclical nature of the gender transportation issue is ever-present and always involves multiple facets.

Additionally, a 1990s study in America and Canada found women were three times more fearful than men of cities, nighttime, and strangers (Kern 2021). The conclusion was highly contested, as some researchers questioned if there was a rational basis for women’s fears, but feminist geographers, sociologists, and psychologists had other ideas (Kern 2021). These scholars found that the more likely reason for these discrepancies is that men and women have different fear triggers. Men tended to fear robberies the most, whereas women fear rape (Kern 2021). Sexual violence and the potential threat of it create much more fear for women than other forms of violence. Researchers in the study concluded that since many women deal with sexual harassment, it creates and reaffirms these fears as possible. This means that women were not being irrational but instead were hyper-aware of their situations.

Cities, nighttime, and strangers—all components the survey analyzed—each produce an increased risk of violence and/or sexual harassment. Incidents such as catcalling or other forms of sexual harassment increase this fear for women and make urban spaces much more daunting, especially when they are traveling alone. Carolyn Whitzman, an urban planner, and researcher find these behaviors completely rational given the circumstances in which women have been placed (Kern 2021). Also, sexual violence is the most underreported incident crime statistic, and, once a woman has been attacked, it increases their fear of being attacked again (Kern 2021). As Farahnaz Mohammed explains, “being sexually assaulted puts you at a much higher risk of being assaulted again in the future,” (Mohammed 2015). This is referred to as revictimization, a term used for victims of sexual harassment as well as sexual assault—and shows that women do have a right to be fearful of attack (Mohammed 2015). There are many theories about why people are more likely to be revictimized, but none have been proven, but the prevailing idea is the concept of learned silence and that people are less likely to report being attacked again. The reasoning can be sentiments of shame, feeling as if it is their fault, and society not believing them.

The lack of policy or urban design to combat these issues has created organizations like “Right to Be” which was formerly known as “Hollaback!” (“Homepage” 2022). This non-profit is focused on ending harassment of all kinds and creating safe spaces. Another example is “Step Street Harassment” whose mission is to end these hostile attacks whether verbal, physical, sexual, and more, in public environments (Stop Street Harassment Home Page). This organization was responsible for creating a survey that found, based on respondents, that around 81% of women have reported experiencing a form of sexual harassment, for context men reported about 43% of individuals experienced harassment (Chatterjee 2018). These non-governmental organizations are helpful and have served the public when the government failed through either lack of action or interest. However, the

government would be more effective at fixing the infrastructure that allows for these issues to persist.

From an urban development point of view, many of these situations can decrease with simple remedies such as lighting, upkeep facilities, and cleaning graffiti (Loukaitou-Sideris 2014). A study conducted in Stockholm discovered women perceive public spaces as areas to be afraid of (Loukaitou-Sideris 2014). This corresponds with the responses of interviewees who stated that dirty and run-down metros increased their anxiety (Millar 2023). Nonetheless, these additions and measures are only possible with funding that can be allocated through policy designs. Therefore, policy needs to be created to produce a design that better serves women.

## **Vienna**

Vienna has become known as a “feminist city” for its work on gender mainstreaming. Gender mainstreaming in Vienna consists of multiple components, such as governmental ideology and urban planning infrastructure, that have made the initiative successful. To show how effective these programs are, city officials have started more than sixty projects that use these gender mainstreaming ideals. This is possible for Vienna because they have prioritized equality for all, and it is a mentality ingrained in their society.

### *Ideology*

European societies developed differently, and traditionally earlier, than the United States. Due to this, these societies tended to develop different ideological values. European governments tend to be more community-minded as opposed to individually focused. Austria, and specifically its capital city Vienna, is not an exception to this phenomenon.

The European Union (EU), of which Austria has been a part since around 1995, passed *The Amsterdam Treaty* (“Briefing No. 26 Women's Rights and the Enlargement of the European Union” 1999). The treaty's goal was to create equal treatment between men and women by having several provisions. These articles aim to achieve goals such as eliminating inequalities in employment between men and women and promoting equal pay (“Briefing No. 26 Women's Rights and the Enlargement of the European Union” 1999). This treaty applies to all EU states, but Austria also has gender equality ingrained in their government.

Austria’s fundamental rights under the constitution are, “all citizens are equal before the law. No one may be discriminated against or favored on the basis of birth, sex, origin, class or religion” (“The Political, Administrative and Legal Systems” 2022). In comparison, the United States tends to favor freedoms as opposed to focusing on equality. The fundamental rights held in each country can reflect the country’s goals and philosophies. Based on these rights stated, it seems that Austria focuses on equality under the law which has been reflected in its policies and infrastructure, especially in Vienna. This is why Austria was successful in passing the Equal Treatment Act adopted in 1993, which prohibits sex discrimination (“Austria” 2022). It bans discrimination on the basis of sex in public services (“Austria” 2022).

General legislation and fundamental rights laid the groundwork to raise awareness of the gender issue in its city. Vienna, unlike other cities, has been able to achieve policy and infrastructure change in their public transportation by raising awareness of gender differences in city life. The city’s Women's Department wanted to start this discussion and brought in “experts, urban planners and architects inside and outside the city administration” to talk about the problem of women's security within cities (Ludwig 2019). This small step then spurred larger action. Informing the people of the harassment and fear of women is an effective tool to explain to everyone the issues women face. Since then, the city has created

pilot projects that then prompted larger movements overall. One of these pilot projects was called “fair shares in the city” which focused on gender-sensitive planning (Ludwig 2019). Since this pilot project, many other initiatives have progressed. A campaign called “Rettungsanker” translates to “lifeline” and focuses on safety for women and girls in public spaces (“Vienna's Strategy to Prevent Gender-Based Violence” 2022).

The Viennese mentality extends to their metro system. In Vienna, unlike in many cities in the United States, the metro system tickets are based on an honor system (Zelinger 2023). There is no teller that you scan a card at like with the D.C. metro system. However, they do conduct random checks; if a passenger does not have a ticket, they receive a fine of around 100 euros (Millar 2023). The system is based on the idea that people will not board without tickets or passes, and they can purchase tickets while on the go by using an app called “WienMobil” (“Wienmobil App” 2023). The metro runs consistently, and if one misses it, there is another tram, bus, or metro arriving around ten minutes later (Millar 2023). Also, the transportation in Vienna is very punctual, which can lessen tardiness and improve economic mobility. These impacts are very important to women to help them move up and around in society.

### *Urban Planning*

Cities like Vienna, Austria have taken the idea of mixed-use urban design to heart and created areas meant to make life easier for women (Foran 2013). Vienna created, for instance, a gender mainstreaming pilot district (Foran 2013). Gender mainstreaming is integrating a gender equality perspective into all levels of development, policies, and projects. The idea is to create a city that is more equitable to everyone. In 2002, a pilot district located in Mariahilf, the 6th District of Vienna, made minor changes in certain places, such as better



streetlights, widening sidewalks, creating barriers between roads and pedestrians, and more to ensure that all people could use the space equally (Cornish 2021).

Developments such as improving streetlights seem to be an obvious advancement, but widening sidewalks has more subtle advantages. Wider sidewalks can make navigating cities easier for women in particular for multiple reasons. Women tend to be responsible for the unpaid care labor of the country, which means they tend to have strollers, bags, or other materials with them while moving around the city. Wider sidewalks allow women to navigate spaces more easily with these materials and objects. Also, this allows for more space between individuals moving past one another, which can lessen the female fear of being in urban areas since they can distance themselves from others. There were multiple reasons these pilot projects in Mariahilf were started, but a specific example is to deal with public transportation. Within these pilot projects, the Viennese government undertook over sixty initiatives that not only added improved street and transit seating but also shortcuts in cities by adding mirrors through alleys (Mcmanus 2020). Moves such as this allow women to feel more confident in their surroundings and less fearful of urban spaces.

However, Viennese urban planners did not stop there; their surveys indicated that girls had stopped going to public parks, and they decided to learn why (Foran 2013). They found that boys created a competitive presence, so they made multiple entrances and varied sports fields to allow girls to feel welcomed in the space (Foran 2013). The knowledge gained through these pilot projects helped Vienna create handbooks and systems that ensure that new constructions are asking “the right questions right at the start.” (Bauer 2009). These questions involve considering multiple perspectives and backgrounds, such as women, who have been an overlooked group for decades. In Austria, around 50.66% of the population are women, which means they make up a majority of the citizens in the city of Vienna. Since these measures, there has been an evident change in the “design and planning of public spaces”

(Bauer 2009). Also, within the government, forty-two of the seventy municipal departments in Vienna have established gendered measures to help produce equal treatment for everyone (Bauer 2009). Overall, these advances have influenced all parts of life in Vienna including transportation since they impacted the design of stop locations.

Vienna has created a city that is more woman-friendly by taking time to understand how women and girls interact with their urban environment, something United States cities have not done (Foran 2013). The United States would benefit from the usage of mixed-use city design because it is a useful starting point to develop a more equitable city environment for women. Using this as an entryway into gender-conscious urban development requires the usage of policy on how the cities can be laid out and expanded.

Eva Kail, an urban planner who popularized gender mainstreaming in cities, stated in an interview that the ideal housing for women is “where women feel at ease and can move about without anxiety at any time of the day,” (Kail 2022). The ease of movement within one’s own space is why the location of housing impacts women. Therefore, how a city is laid out matters, especially considering where transportation stops are placed. The “majority of the users of public transport are women, children, young people and elderly,” which, compounded with the need for affordable housing, can create an economic burden (Kail 2022). Housing affects transportation because it impacts where stops are placed, which in turn determines where communities are built and how people can access the transportation network.

### *Economic Burden*

Vienna is a city that is very considerate of all backgrounds and genders, meaning they create options for people with less financial means. Women tend to be more impoverished than men and reliant on governmental entities such as transportation. Along with being more

likely to face economic burdens, women are more reliant on public transportation. While on these transportation systems, women often need to go on trip chains. However, unlike many other metro systems where you pay each time you get on and off, in Vienna, you pay one flat fee for a period and can take multiple trips (“Wienmobil App” 2023).

In Vienna, there are multiple options for single tickets, day passes, 8 days, a month, and even a year. This decreases the economic burden on people who take trip chains, which tend to be women. These passes also have options for discounts if you are a senior citizen, traveling with a child or have a dog, or are experiencing low income (Zelinger 2023).

Children up to the age of six travel for free, and children fifteen years or younger can travel for free on Sundays and school holidays (“Wienmobil App” 2023). The prices are very sensible, and all interviewees found the prices to be very reasonable (“Wienmobil App” 2023). They also mentioned that there were options for students that had even lower prices (“Wienmobil App” 2023). These programs and low prices allow for the economic burden to be alleviated.

Multiple individuals have reported that the Viennese public transport system is the most affordable system they have encountered (Argitis 2023; Fanelli 2023; Millar 2023; and Zelinger 2023). These individuals have had experience with both American and European transportation. These interviews show how affordable Vienna’s system is compared to other first-world countries. Michelle Fanelli, who lived in Vienna for about four months, spoke about how reasonably priced the Viennese system was and how it offered multiple types of discounts for the different groups (Fanelli 2023).

### *Sexual Harassment and Assault*

Vienna has implemented measures developed in the pilot district to make women feel safer while walking and on public transportation, such as adding more streetlights and

widened sidewalks (Foran 2013). These measures have been furthered by the help of the Vienna urban designer, Eva Kail (Cornish 2021). Kail's work on gender mainstreaming in Vienna has helped to create measures that help women feel more in control of their space. Brighter sidewalks allow for there to be fewer shadows in dangerous places, which can decrease female anxiety. Also, wider sidewalks can help eliminate hidden spaces to hide and make women feel safer. These measures can improve the feeling of reclaiming the city space and lessen the areas women tend to avoid (Kern 2022, 145). Kail was the person credited with bringing attention to the differences in the lives of women versus men in urban areas by documenting their behavior with photographs (Mirochnik 2021). These changes have led to not only a decrease in female anxiety but also the overall crime rate (Mirochnik 2021).

Vienna also offers a helpline at all hours of the day that offers support and resources for individuals who experience violence ("24-Hours Women's Emergency Helpline - 01 71 71 9" 2011). These resources and organizations show how committed Vienna is to aiding women and girls. Having an institution that has resources to help, such as this, shows how women are prioritized by the government.

## **Conclusion**

The present research shows a clear issue of gender representation in urban environments by analyzing specific aspects of cities like housing and transportation. Women struggle more in cities than men. However, despite the data to support that statement, too little is being done to change the situation in the United States. Although some cities are looking at reporting this information, better reporting will not be enough to fix poor zoning designs, sexual harassment, or the impact of female poverty. Policies must be implemented to change how these mechanisms in cities function. Transportation should serve everyone and be safe for everyone to use.

Vienna is an example of how gender mainstreaming can be done successfully. The challenge, however, is that Vienna is a city that prioritizes creating an environment that is equitable to everyone by helping disenfranchised groups, in this case, women. Vienna has inspired other European countries such as Berlin, Barcelona, Stockholm, and Copenhagen to create and integrate gender mainstreaming into their cities' designs (Mirochnik 2021). However, Vienna did not achieve this only through a governmental approach. Vienna used top-down and bottom-up approaches to create a gender-equitable city space (Kail 2022). The United States has started this with certain grassroots nonprofits advocating for harassment-free spaces, such as “Right To Be,” but still lacks governmental action and support.

Vienna, unlike other cities, has made an effort to not only work on implementing policy and infrastructure to make women feel safer but has also taken steps to make women feel included in planning for the city. Increasing women’s accessibility, such as widening streets, makes them feel like the city also belongs to them. In Vienna, this has also been accomplished by naming streets and public places after women to help them feel more included in the city space (Thomson 2022). This move is a method of inclusion that can make women feel like they too have a right to the city. Such a small change as streets named after women could be an easy first step to take toward gender inclusion in cities.

Additionally, being open and communicative has helped Vienna create gender mainstreaming projects because they listen to the needs of the public. In any endeavor, the first step is identifying the problem, and Vienna did this in the 1990s with a survey and continues to do this with open communication (Kail 2023). Washington, D.C., along with other large U.S. cities, has not taken initiative to do this and remains hard to contact. However, if these U.S. cities want to start survey options like Vienna are a constructive route to take, especially because the cities can look at the questions Vienna asked as a starting point.

Improving transportation to be more gender inclusive does not need to start with mass change, but small steps can be taken to make transportation more equal. Something as simple as offering overhead straps on metros and buses being lowered for people of smaller height—which tends to be women (Zhen 2021). Another small change that could make a large impact is having drop-off requests during late-night services (Zhen 2021). That way women are not left in areas that could cause them distress or be a location of sexual harassment predators. This simple change in infrastructure can create an environment that is more inclusive to all genders. Noticing the diverse range of needs for different genders is an important step to creating a policy that is more inclusive and an environment that does not continue to disenfranchise women. Improving the public transportation system to help women—its biggest user—can, in turn, help to advance their career opportunities and feel safer in urban environments.

Based on the interviewees' responses, they all preferred the Viennese transportation systems to American transportation systems (Argitis 2023; Millar 2023; and Zelinger 2023). Vienna is known as a “feminist city” for many reasons, but a large part of that is gender-inclusive design in aspects of the city such as public transportation. All interviewees were young women who stated they felt significantly safer in Vienna primarily based on their surroundings. Aspects such as lighting, cleanliness, and convenience played a role in their preference for Vienna. These changes are not monumental but require a policy to create funds. Another step is making a conscious effort to design cities in ways that expand streets—so there are more eyes on the streets—and increase mixed-use development, as this would create more equitable cities. There are challenges that are ingrained in the U.S. mentality, but safety should outweigh these obstacles.

Applying policies focused on gender equality can be easier to implement in a place like Austria because the country has that agenda ingrained in its constitution. However, this

could be difficult in the United States since there is a stronger focus on the individualistic nature of the country and personal freedoms. This is partly due to the lack of motivation to implement change to help others instead of oneself. A policy can provide a solution to these problems in a way that is not merely a band-aid but a holistic change that improves cities for women. Overall, there is a great need for gender mainstreaming in U.S. cities. Women's needs for transportation have been ignored for long enough, but until the government starts to care about other perspectives and changes its traditional mindset of design, advancement for women in cities will be stagnant.

The United States is not likely to be a country that implements federal change, but there are other options and avenues to follow. Vienna, Austria was not able to change from policy alone, but through bottom-up grassroots activism as well. The same can be done in the United States, and there has already been a push to do so with non-profits such as “Right To Be” increasing its message and impact. Also, certain states and cities have taken the initiative by decreasing the cost of transportation.

Looking beyond the political landscape there are additional physical adjustments that can be made to cities to make women feel less fearful of urban and transit spaces. Adapting the vehicles and cars to the needs of all passengers is one example, but also improving lighting which can help many groups, not only women. All of these routes individually do not amount to much change but collectively can have a real impact on how women feel in cities and how they interact with it. These steps are in working in the right direction of creating gender-equitable cities.

Measures are most likely to be implemented at the local and state level since it is easier to pass legislation through due to the political opinions being more unified and also the issues being more focused on one location. Also, many of the solutions used to help deal with the issues that women face can help other groups such as the elderly. Elderly individuals are

more likely to vote which means the politicians are more likely to implement policy. This means that patterning with this group with similar interests can help women, but this does not cover all of the changes that women need to make truly gender-equal spaces.

Overall, this paper explains gender mainstreaming in transportation does not have a one-step solution. The repetitious nature of the paper is indicative of the cyclical nature of gender and transportation and how every part plays into the others. Creating a gender-equitable transportation system involves multi-level issues that impact women in all aspects of their lives. To combat these issues, solutions are needed at all levels. However, in the United States, this is not likely to be seen on the federal level, but small actions can still have positive impacts on gender equity in cities. Bottom-up approaches like non-profits offer an avenue to help lessen the burden of women in cities. Local governments can also start to take steps, which is what is being seen in the United States; however, these changes were economically focused, not gender-based. These movements can help to create cities that serve women as well as men and make urban areas safer for women and more functional.



## Bibliography

“9.6f: The Feminization of Poverty.” *Social Sci LibreTexts*. Libretexts, February 20, 2021.

[https://socialsci.libretexts.org/Bookshelves/Sociology/Introduction\\_to\\_Sociology/Book%3A\\_Sociology\\_\(Boundless\)/09%3A\\_Stratification\\_Inequality\\_and\\_Social\\_Class\\_in\\_the\\_U.S./9.06%3A\\_Poverty/9.6F%3A\\_The\\_Feminization\\_of\\_Poverty](https://socialsci.libretexts.org/Bookshelves/Sociology/Introduction_to_Sociology/Book%3A_Sociology_(Boundless)/09%3A_Stratification_Inequality_and_Social_Class_in_the_U.S./9.06%3A_Poverty/9.6F%3A_The_Feminization_of_Poverty).

“24-Hours Women’s Emergency Helpline - 01 71 71 9.” Stadt Wien - Offizielle & aktuelle Infos und Services der Wiener Stadtverwaltung, February 17, 2011.

<https://www.wien.gv.at/english/social/women/services/emergency-helpline.html>.

Anderson, Monica. “Who Relies on Public Transit in the U.S.” Pew Research Center. Pew

Research Center, April 7, 2016. <https://www.pewresearch.org/fact-tank/2016/04/07/who-relies-on-public-transit-in-the-u-s/>.

“Austria.” Austria - Federal Equal Treatment Act (B-GBG), (BGBl. 1993/100). International Labour Organization. Accessed December 8, 2022.

[https://www.ilo.org/dyn/natlex/natlex4.detail?p\\_lang=en&p\\_isn=42823](https://www.ilo.org/dyn/natlex/natlex4.detail?p_lang=en&p_isn=42823).

Badger, Emily. "As American as Apple Pie? the Rural Vote's Disproportionate Slice of Power." *New York Times (1923-)*, Nov 21, 2016.

<https://umw.idm.oclc.org/login?url=https://www.proquest.com/historical-newspapers/as-american-apple-pie-rural-votes/docview/2310077982/se-2>.

Bauer, Ursula. “Gender Mainstreaming in Vienna: How the Gender Perspective Can Raise the Quality of Life in a Big City.” *KVINDER, KØN & FORSKNING NR.* 2009.

Accessed March 29, 2023.

Bauer, Ursula. "Vienna - A City of Equality." *EPrints Services*. Accessed November 10, 2022. <http://www.eprints.org/>.

Best, Amy L. "Freedom, Constraint, and Family Responsibility: Teens and Parents Collaboratively Negotiate Around the Car, Class, Gender, and Culture." *Sage Publication*. January 2006. <https://doi.org/10.1177/0192513X05275422>.

"Briefing No. 26 Women's Rights and the Enlargement of the European Union." European Parliament . European Parliament , February 23, 1999. [https://www.europarl.europa.eu/enlargement/briefings/26a2\\_en.htm](https://www.europarl.europa.eu/enlargement/briefings/26a2_en.htm).

Chatterjee, Rhitu. "A New Survey Finds 81 Percent Of Women Have Experienced Sexual Harassment." *NPR*, February 21, 2018. <https://www.npr.org/sections/thetwo-way/2018/02/21/587671849/a-new-survey-finds-eighty-percent-of-women-have-experienced-sexual-harassment>.

Chemaly, Soraya. "DC Metro Rape Highlights Why Women Are Always Aware of Rape." *HuffPost*. HuffPost, May 27, 2017. [https://www.huffpost.com/entry/for-women-rape-isnt-a-mom\\_b\\_9997350](https://www.huffpost.com/entry/for-women-rape-isnt-a-mom_b_9997350).

Cohen, Alex, and Wilfred U. Codrington. "The Equal Rights Amendment Explained." Brennan Center for Justice. Brennan Center for Justice at NYU Law, January 23, 2020. <https://www.brennancenter.org/our-work/research-reports/equal-rights-amendment-explained>.

Cornish, Sophie. "Vienna: A 'Paradise' of Low Crime Rates and the Pioneer of Gender Mainstreaming." *Stuff*, October 29, 2021. <https://www.stuff.co.nz/dominion->

post/wellington/126770782/vienna-a-paradise-of-low-crime-rates-and-the-pioneer-of-gender-mainstreaming.

“Cost to Ride: WMATA.” Washington Metropolitan Area Transit Authority. Accessed February 22, 2023. <https://www.wmata.com/fares/basic.cfm>.

Dundes, Lauren. “‘Even More than That, Men Love Cars’: ‘Car Guy’ Memes and Hegemonic Masculinity.” *Frontiers in sociology*. U.S. National Library of Medicine, January 4, 2023. <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC9845925/>.

Foran, Clare. “How to Design a City for Women.” *Bloomberg.com*. Bloomberg, September 16, 2013. <https://www.bloomberg.com/news/articles/2013-09-16/how-to-design-a-city-for-women>.

“Gender & Housing in California.” Gender Equity Policy Institute (GEPI), August 17, 2022. <https://thegepi.org/gender-housing-california/>.

“Global Mobility Report 2017.” *Sustainable Mobility for All*. Accessed October 3, 2022. <https://openknowledge.worldbank.org/bitstream/handle/10986/28542/120500.pdf?sequence=6>.

“Homepage.” Right To Be, Accessed November 10, 2022. <https://righttobe.org/>.

Kail, Eva. “Fair Shared Cities: Gender Planning and Gender-sensitive Design of Public Spaces.” *City, Care and Education*, no. 8. (2022), accessed March 15, 2023.

Kapur, Sahil. "A red-blue divide made transit money contentious in the infrastructure bill."

*NBC News*, August 8, 2021. <https://www.nbcnews.com/politics/congress/red-blue-divide-made-transit-money-so-contentious-infrastructure-bill-n1275852>.

Kashinsky, Lisa, and Tanya Synder. "Mayors Are Wielding Free Transit to Draw People Back Downtown. It's Not That Easy." *POLITICO*. Accessed November 11, 2022.

<https://www.politico.com/news/2022/06/15/inflation-free-public-transportation-00039644>.

Kern, Leslie. *Feminist City: Claiming Space in a Man-Made World*. VERSO BOOKS, 2021.

Larrimore, Jeff, and Jenny Schuetz. "The Fed - Assessing the Severity of Rent Burden on Low-Income Families." Federal Reserve Board, December 22, 2017.

<https://www.federalreserve.gov/econres/notes/feds-notes/assessing-the-severity-of-rent-burden-on-low-income-families-20171222.html>.

Loukaitou-Sideris, Anastasia. "Fear and Safety in Transit Environments from the Women's Perspective." *Security Journal* 27, no. 2 (04, 2014): 242-256.

<https://umw.idm.oclc.org/login?url=https://www.proquest.com/scholarly-journals/fear-safety-transit-environments-womens/docview/1518575733/se-2>.

Loukaitou-Sideris, A., and A. Weinstein Agrawal. "Sexual Crime and Harassment on Public Transportation: A Study." *Metro Magazine*. *Metro Magazine*, May 14, 2020.

<https://www.metro-magazine.com/10111994/sexual-crime-and-harassment-on-public-transportation-a-study>.

Ludwig, Micheal. “Vienna Is Moving – The Path Towards Equal Mobility for Women and Men.” newcities. NewCities Foundation, March 5, 2019. <https://newcities.org/the-big-picture-vienna-is-moving-the-path-towards-equal-mobility-for-women-and-men/>.

Madison Argitis, interview by Sarah Miller, February 17, 2023, interview 2, transcript and recording, University of Mary Washington.

Marcos, Cristina. “House Passes Bill to Bolster Reporting of Sexual Assaults on Public Transit.” *The Hill*. March 30, 2022. <https://thehill.com/homenews/house/600422-house-passes-bill-to-bolster-reporting-of-sexual-assaults-on-public-transit/>.

Margaret Millar, interview by Sarah Miller, February 9, 2023, interview 1, transcript and recording, University of Mary Washington.

McDonnel, Ania. “Addressing Gender Disparities in Transportation.” Gender Policy Report, July 24, 2019. <https://genderpolicyreport.umn.edu/addressing-gender-disparities-in-transportation/>.

Mcmanus, Kat. “Planning for inclusivity: How Vienna built a gender-equal city” *LGIU*, September 1, 2020. <https://lgiu.org/planning-for-inclusivity-how-vienna-built-a-gender-equal-city/>.

Michelle Fanelli, interview by Sarah Miller, February 23, 2023, interview 4, transcript and recording, University of Mary Washington.

Mikaela Zelinger, interview by Sarah Miller, February 17, 2023, interview 3, transcript and recording, University of Mary Washington.

Mirochnik, Karina. "How Vienna Designed a City for Women." *Women Across Frontiers Magazine*, May 25, 2021. <https://wafmag.org/2018/12/how-vienna-designed-a-city-for-women/>.

Mohammed, Farahnaz. "The Repetition Compulsion: Why Rape Victims Are More Likely To Be Assaulted Again." *Girls' Globe*. *Girls' Globe*, August 4, 2015. <https://www.girlsglobe.org/2015/08/04/the-repetition-compulsion-why-rape-victims-are-more-likely-to-be-assaulted-again/>.

"New Census Report Shows Public Transportation Commuters Concentrated in Large Metro Areas of the United States." *Census.gov*. United States Census Bureau, April 1, 2021. <https://www.census.gov/newsroom/press-releases/2021/public-transportation-commuters.html>.

Okin, Susan Moller. *Justice, Gender, and the Family*. New York: Basic Books a Member of the Perseus Books Group, 2007.

Parker, Kim, Juliana M. Horowitz, Anna Brown, Richard Fry, D'Vera Cohn, and Ruth Igielnik. "What United and Divides Urban, Suburban, and Rural Communities: 2. Urban, suburban and rural residents' views on key social and political issues." *Pew Research Center*, May 22, 2018. <https://www.pewresearch.org/social-trends/2018/05/22/urban-suburban-and-rural-residents-views-on-key-social-and-political-issues/>

PRB. "American Attitudes about Poverty and the Poor." PRB, May 30, 2002. <https://www.prb.org/resources/american-attitudes-about-poverty-and-the-poor/>.

Shrikant, Aditi. “The bus gets a lot of hate. American cities are trying to change that.” *Vox*, November 5, 2018. <https://www.vox.com/the-goods/2018/11/5/18057352/bus-stigma-public-transportation-micro-transit>.

Stop Street Harassment Home Page. Accessed April 9, 2023. <https://stopstreetharassment.org>

“Supporting Active Living through Mixed-Use Developments.” American Planning Association, 2022. <https://www.planning.org/blog/9227408/supporting-active-living-through-mixed-use-developments/>.

Tengler, Steve. “New ‘Pink Tax’ Study Shows Women Pay Upwards of \$7,800 More For Car Ownership.” *Forbes*. October 27, 2021.

<https://www.forbes.com/sites/stevetengler/2021/10/27/new-pink-tax-study-shows-women-pay-upwards-of-7800-more-for-car-ownership/?sh=100adaa463d8>.

“The 1st Amendment of the U.S. Constitution.” National Constitution Center – constitutioncenter.org. Accessed December 8, 2022. <https://constitutioncenter.org/the-constitution/amendments/amendment-i>.

“The Problems with Euclidean Zoning.” *Dome RSS*. Boston University, July 18, 2018.

<https://sites.bu.edu/dome/2018/07/19/the-problems-with-euclidean-zoning/>.

“The Political, Administrative and Legal Systems.” migration.gv.at. Accessed December 8, 2022. <https://www.migration.gv.at/en/living-and-working-in-austria/austria-at-a-glance/the-political-administrative-and-legal-systems/>.

Thomson, Ewan. “Cities Aren't Designed for Women. Here's What's Needed Next.” World Economic Forum, October 28, 2022.

<https://www.weforum.org/agenda/2022/10/designing-cities-for-women-undp-report/>.

Thorne, Emily Rose. “Catcalling, While Not Illegal, Is a Common Threat That Women Face.” Georgia Public Broadcasting. *NPR*, July 30, 2019.

<https://www.gpb.org/news/2019/07/30/catcalling-while-not-illegal-common-threat-women-face>.

“U.S. Car Owners by Gender 2021.” Statista. Statista Research Department, September 30, 2022. <https://www.statista.com/statistics/1041215/us-car-owners-by-sex/>.

“U.S. Cities Factsheet.” Center for Sustainable Systems. Accessed October 1, 2022.

<https://css.umich.edu/publications/factsheets/built-environment/us-cities-factsheet>.

“Women's Right to the City Manifesto.” Right to the city. Accessed November 15, 2022.

<https://www.right2city.org/news/womens-right-to-the-city-manifesto/>.

“Vienna's Strategy to Prevent Gender-Based Violence.” Eurocities. Eurocities, November 28, 2022. <https://eurocities.eu/latest/viennas-strategy-to-prevent-gender-based-violence/>.

“Wienmobil App.” Wiener Linien. Accessed February 22, 2023.

<https://www.wienerlinien.at/web/wl-en/wienmobil-app>.

Williams, James Ladi, Ammar A. Malik, and Sara McTarnaghan. “Gender-Based Violence on Public Transportation - Urban Links.” Urban Links. U.S. Agency for International Development Office of Land and Urban, June 2020. [https://urban-links.org/wp-content/uploads/GBV-on-Transportation\\_6-26-2020\\_updated\\_DM.pdf](https://urban-links.org/wp-content/uploads/GBV-on-Transportation_6-26-2020_updated_DM.pdf).



Zanona, Melanie. "How the Democratic and GOP platforms differ on infrastructure." *The Hill*, July 26, 2016. <https://thehill.com/policy/transportation/289305-how-the-democratic-and-gop-platforms-differ-on-infrastructure/>.

Zhen, Sina. "Rethinking Public Transportation for Women's Safety and Security." Sustainable Mobility. ICLEI Sustainable Mobility, March 8, 2021. <https://sustainablemobility.iclei.org/rethinking-public-transportation-for-womens-safety-and-security/>.

## Appendix A

### Questions asked to interviewees:

#### For the civilians/students

1. How long did you live/been in Vienna?
2. How would you describe your experience with the Viennese public transportation system?
3. How familiar would you describe yourself with US transportation systems, specifically the metro system?
  - a. Have you lived in and/or near US systems.?
4. How have your experiences with the D.C. Metro System been?
5. How would you compare these two systems to each other?
6. Did you have any negative experiences with the Viennese public transportation system? Any ones with the US system?
7. If you had to pick a transportation system, which one would you prefer and why?
8. How would you describe the cleanliness and appearance of any US metro system? What about the Viennese one?
  - a. How would you describe the lighting of stations and stops in US systems compared to Vienna?
9. Have you ever worried about your safety in the US system? What about the Viennese one?
  - a. Did you feel safer in one as opposed to the other?
  - b. Have you experienced harassment on either?
10. How would describe the cost of each?
11. Are there any other reasons about that Viennese metro system that you enjoyed?

#### For governmental entities

1. Does your organization receive any feedback about women's inequality in transportation?
  - a. If so, how has your organization done anything with this feedback?
2. Are there any protocols in place to help deal with harassment?
3. Would more policies directed at creating gender-equitable infrastructure help solve these problems?
  - a. If you already have these policies, what are they? And how did they get started?

- b. If not, why?
- 4. Are there small steps that have been or could be taken to help deal with the fear of public transportation faced by women?
- 5. Spaces that appear intimidating, such as lack of lighting or graffiti, tend to make people, specifically, women, feel uncomfortable about using these areas or being near them. Are there any initiatives to combat this feeling? If not, why?
- 6. Does the organization have any steps being taken to help women?
  - a. If so, what are they?
- 7. Has your department ever partnered with nonprofits to help deal with harassment?
- 8. Does your government/organization do anything to combat the economic burden of public transportation?
  - a. If so, what do you do? If not, why?
- 9. Have you ever considered how the location of a metro stop/station might impact housing, economics, and/or harassment?

## Appendix B

### General Notes from Interviewees:

#### Interview Civilian/Student:

Interviewee 20920231: Margaret Millar

- Vienna's System
  - Works on an "honor system"
    - Random check fined ~100 euros
  - Wien Mobile App used.
- More homelessness in D.C. than in Vienna
- More accessible trip chaining in Vienna
- Vienna has special spaces for strollers.

Interviewee 21720231: Madison Argitis

- Preferred Vienna
  - Big on safety
- The Vienna payment model was more effective.
- Did not experience harassment in Vienna.

Interviewee 21720232: Mikaela Zelinger

- Viennese Public transit system
  - Very punctual and always felt safe.
- Did not worry about safety while in Vienna.
- Experienced a lot of catcalling in the U.S.
  - Specifically in L.A.
- Cheap public transportation in Vienna

Interviewee 22320231: Michelle Fanelli

- Vienna was a very straightforward system.
- Negative stigma about public transportation in the U.S. but not in Vienna
  - Lots of horror stories in the states
- Good lighting in Vienna
- Graffiti made her uncomfortable and was very prevalent in the U.S.