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Perceptions of Bike Sharing in Underserved Communities Within Milwaukee and the Twin Cities

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PERCEPTIONS OF BIKE SHARING IN UNDERSERVED COMMUNITIES WITHIN

MILWAUKEE AND THE TWIN CITIES

by

James Hannig

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ABSTRACT

PERCEPTIONS OF BIKE SHARING IN UNDERSERVED COMMUNITIES
WITHIN MILWAUKEE AND THE TWIN CITIES

by

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Under the Supervision of Professor Robert J. Schneider, PhD

Despite becoming increasingly more popular in cities across North America, many bikeshare systems have received criticism for not reaching minority and low-income populations. Several bikeshare operators have implemented measures to reach these populations including removing financial barriers, placing stations in underserved neighborhoods, and partnering with various community organizations. However, until recently, few have explored how people in these underserved areas perceive bike sharing.

Feedback was solicited from key community partners in Milwaukee, Wisconsin and Minneapolis/St. Paul, Minnesota to better understand how bike sharing is perceived in underserved communities and to determine whether other models could better address the transportation needs of these communities. A total of 26 interviews were conducted with community partner organizations including social service providers, housing authorities, bicycle advocates, transit advocates, institutions of higher education, and other nonprofit organizations.

The study indicated that there is still a great deal of research needed to understand how underserved communities truly perceive bike sharing—or even biking for that

matter. However, relationships play a key role in building trust and empowering communities to participate in activities such as biking and bike sharing.

Other entry points to biking and bike sharing such as long-term bicycle loans and biking as recreation (e.g., initial station installations in parks) may be more effective in making the bike more acceptable to community members who wish to realize its benefits. In the long-term, investing in these types of programs may prove more effective in building a bikeshare customer base in underserved communities.

Finally, efforts to provide equitable access to bike sharing need to include targeted activities for women, families, and groups. Evidence suggests that women and families are particularly disenfranchised and excluded from biking and bike sharing opportunities. By making intentional accommodations to include women and families, bicycle advocates and bikeshare operators may realize increased participation from all members of the community.

As a more substantial library around the topic of bike and bikeshare equity emerges, advocates, planners, and bikeshare operators need to ensure that equitable practices are being explored and implemented to the greatest extent possible—particularly in the way underserved communities' needs are met through inclusion and engagement.

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1 Introduction

Social justice and transportation decision making have been historically at odds in America. Whether it was connecting the East and West Coasts by rail in the late 1800s or the highway construction boom of the mid-20th Century, transportation investments have often benefited the majority prior to reaching those most in need. Such was also the case with bicycling in the second half of the 20th Century. However, in recent years, many previously underserved and underrepresented populations (e.g. low-income communities, communities of people of color, and women) have found a voice within the bicycle community.

While strides have been made in including and engaging diverse populations within bicycle planning, increasing scrutiny has been met in many low-income and minority communities when bicycle infrastructure plans are revealed. Some members of these communities, as well as a number of bicycle advocates, see these efforts as encroachments on their neighborhood's identity, history and very existence. In many instances, the outcry is not caused solely by the infrastructure project, but by an underlying social, economic, or racial fissure that has been quietly widening for decades.

Despite being uncomfortable for many, this dialogue is necessary to achieve effective, equitable transportation. While bike lanes are increasingly criticized for having gentrifying effects in some neighborhoods, the emerging bike sharing industry continues to be overlooked as a potential opportunity to equitably meet the transportation needs of historically underserved communities.

Some bikeshare operators have implemented measures to minimize or remove barriers for disadvantaged individuals; however, it appears that these efforts have had

little effect in raising membership in low-income and minority populations. Some of this inequity may be attributed to shortfalls in planning systems, not mitigating physical and cultural barriers, and the profit-based business model of many bike share systems (Kodransky and Lewenstein 2014). Furthermore, while these efforts to reach underserved members of the community have been conducted in good faith, it is unclear whether operators and decision makers have engaged underserved communities to assess their actual transportation and bicycling needs. A growing interest in equitable access to bikeshare, in places like Philadelphia and Chicago, indicates that decision makers may be starting to ask these questions.

The following thesis study, conducted between May 2014 and May 2015, explores the nexus of bicycle planning, bike sharing and equity by asking how underserved communities perceive biking and bike sharing and whether there other models that could better address their specific transportation needs.

1.1 Terminology

This document uses several terms common to the bicycle planning and social justice professions, such as bikeshare, bicycle advocates, community partners, low-income populations, and minority populations. Appendix A provides a description of these and other terms commonly used throughout the document.

1.2 Bicycle Equity Initiative

Transportation in America appears to be changing. An unprecedented number of transportation choices are available, and many Americans are electing to take the roads—or rather the modes—less traveled, including bicycling (League of American Bicyclists 2013; McKenzie 2014; Bratman and Jadhav 2014). According to recent studies, bicycle

commuting rose by 61% between 2000 and 2012 (McKenzie 2014; Bratman and Jadhav 2014). While bicycling began to make a comeback as early as the late 1990s, only in the last decade have low-income communities and communities of people of color have expressed a rising interest in bicycling (League of American Bicyclists 2013; McKenzie 2014).

Between 2001 and 2009, bicycling grew substantially within African American (by 100%), Asian American (by 80%), and Hispanic (by 50%) communities (League of American Bicyclists 2013). Data from the U.S. Census Bureau indicate that these growth trends have continued, particularly among those with low household incomes and those that self-identify as Hispanic, Some Other Race or Two or More Races (McKenzie 2014). The increasing diversity within bicycling demographics has been referred to by some as the "New Majority" (League of American Bicyclists 2013; Taylor 2013; Lugo et al. 2014).

Despite this increasing interest in bicycling, some in the bicycling community acknowledge that social inequalities and barriers still present opportunities and challenges to provide equitable access to biking. Researchers and advocates have indicated that low-income populations and minorities (e.g. persons of color and women) encounter unique–often compounding–barriers uncommon to the majority of cyclists (i.e. middle-class, white males) (Community Cycling Center 2012; League of American Bicyclists 2013; McCray et al. 2013; Bratman and Jadhav 2014).

The study of barriers to bicycling appears to be relatively new and somewhat disjointed. While a few researchers have classified barriers as physical and social, other classifications such as safety- and comfort-related, socioeconomic and "culturally-

specific" have been noted by some advocates and bloggers (Community Cycling Center 2012; League of American Bicyclists 2013). Examples of physical barriers include lack of access to working bicycles or bicycle infrastructure (e.g. bike lanes, bike paths and, in some cases, sidewalks). Barriers related to safety and comfort include not knowing how to ride, discomfort riding with traffic, lack of understanding of rules of the road, and lack of safe storage (i.e., fear of theft), access to a space to change clothes or shower, difficulty in carrying bulky items, (Community Cycling Center 2012; League of American Bicyclists 2013; McCray et al. 2013). Low-income and minority communities often face a wide range of socioeconomic barriers including the cost of maintaining a bike, long commutes, long-term unemployment, poor living conditions, poor health, and a propensity toward car ownership (Community Cycling Center 2012; Long et al. 2009; Bratman and Jadhav 2014). Cultural barriers including religious and cultural clothing, hairstyles, and police discrimination appear to be the least documented of the categories. (Bozorg et al. 2011; Community Cycling Center 2012; Versey 2014).

Recognizing the significance of these barriers, the paradigm appears to be slowly shifting away from an emphasis on bicycle infrastructure. Instead, many within the bike equity movement are focusing on the social infrastructure (bike shops, clubs, and community rides) designed to include people and build communities (Lugo et al 2014). Advocates are increasingly more aware that without "thoughtful, proactive, and meaningful involvement with historically marginalized communities [cities] will continue to systematically underinvest in poorer neighborhoods." (Andersen and Hall 2015)

Additionally, collaboration among bicycle advocates, decision makers, community partners (see **1.1 Terminology**) appears to help raise awareness of bicycling

and transportation needs of underserved communities (League of American Bicyclists 2013; Taylor 2013; Cycles for Change 2013; McKenzie 2014). However, many barriers to bicycling remain, some of which may indicate deeply entrenched inequity within bicycle planning itself.

1.3 Equity Concerns in Bicycle Planning

A few researchers and advocates have challenged bicycle planners and decision makers to take a closer look at the communities being impacted—or neglected—and rethink what equity means. In some cases, it means exploring the symbolism that may be behind various modes of transportation. For example, growing research indicates that ownership of personal automobile is a display of "conspicuous consumption" (demonstration of "one's economic position" through purchases) in some African American and Hispanic communities, and that it often results in "lower spending by racial minorities on items likes health and education, as well as their lower rates of wealth accumulation." (Charles et al. 2007; Bratman and Jadhav 2014) Recent studies indicate that the bicycle may also be a symbol, specifically, in low-income and African American communities the bicycle represents poverty (Hoffmann 2013; Buck 2012; Bratman and Jadhav 2014).

One researcher posed that the immense amount of resources being poured into minority communities may be largely going to waste because of what the bicycle symbolizes to them (Hoffmann 2013). Another recent study showed that minority survey respondents "ranked cycling seventh out of nine transport modes, ahead of only taxis and bike sharing." Few believed biking "belonged" to any particular ethnic, gender or income group; however, 6.4 percent of respondents noted cycling to be socially unacceptable

(Bratman and Jadhav 2014). Still, not everyone has the luxury choosing their mode of transportation; many low-wage workers cannot afford a car or public transit are "effectively captive cyclists" (Beltran and Fuller 2010). These "invisible cyclists" remain unaccounted and unreached, some intentionally, others by circumstance. They are unlikely to use mainstream bicycle infrastructure, attend bicycle-centric events, or even self-identify as part of the bicycle community (Hoffmann 2013). However, this should not make these bicyclists any less a part of the bicycle community.

In some cases, the bicycle may also signify a tool that can build or gentrify communities and that further solidifies entrenched race and class barriers (Hoffmann 2013). Paradoxically, Portland, Oregon—commonly considered as one of the most bicycle-friendly city in America—has been criticized on occasion for bicycle inequity, where bike lanes were dubbed "white stripes of gentrification" (Bozorg et al. 2011; Davis 2011; Hoffmann 2013; Walljasper 2013). Specifically, tensions became apparent when planners and emerging bicyclists unveiled plans to expand bike lanes along North Williams Avenue in the Albina neighborhood (Hoffmann 2013). Among a list of concerns, long-time African American residents expressed their frustration with the city neglecting their neighborhood for over 60 years, only to be acknowledged when it benefitted a growing, overwhelmingly white presence (Bozorg et al. 2011; Davis 2011; Hoffmann 2013; Walljasper 2013). Furthermore, plans appeared to be ineffectively communicated to the community, and the importance of the neighborhood's deep, black history may have been overlooked (Hoffmann 2013; Walljasper 2013).

Other examples of cases where inequity came into question over bike lanes have been observed in New York City (Stein 2011), Washington D.C. (Davis 2011; Walljasper

2013), Chicago, Memphis, and Austin [Texas] (Walljasper 2013). In many cases, the bike lanes were not the problem; they highlighted existing social, economic and racial rifts (Walljasper 2013). Despite the good and bad that can be spurred by the bicycle, or rather those with bicycles, "there is little about bicycle technology that lends itself to race and class divisions [...] by focusing on bicycle infrastructure that will please an already privileged demographic, many marginalized bicyclists will inevitably remain in the margins" (Hoffmann 2013).

Some examples in which decision makers have used bicycle infrastructure investments, such as bike lanes and bike sharing, "to recruit educated, upwardly mobile people -- with little regard to its impact on residents who fall outside of that demographic" (Stein 2011; Hoffmann 2013) "show that bicycle infrastructure […] correspond with the gentrification of neighborhoods. By no means, however, should this correlation be interpreted as sole causation or as inevitable" (Stein 2011). Instead, planners and decision makers should heed the call to focus on "needs-based infrastructure construction" and "reframe their priorities in order to serve those most vulnerable to gentrification, rather than those who profit from it" (Stein 2011). One such area to refocus on equity is in the emerging bike sharing industry.

1.4   Bike Sharing Background

In its most basic form, bicycle sharing, bike sharing, or bikeshare is a form of transportation in which users temporarily access a bicycle, often for short trips. In most cases, bike sharing allows a user to access a bicycle from a starting point (a station established by the system's operator), use the bicycle, and later deposit the bicycle at another (or the original) station within the bikeshare network (Toole Design Group 2012;

Gauthier et al. 2013). With origins dating back to the 1960s in The Netherlands, bike sharing is not a new concept (Gauthier et al. 2013). In the mid-2000s, technological advances, (e.g. radio frequency identification (RFID), credit card readers, and real-time GPS) helped bike sharing experience resurgence around the world in which many systems now utilize automated self-serve kiosks at each bikeshare station (Toole Design Group 2012; Gauthier et al. 2013; Buck 2012). As of 2013, over 600 bikeshare systems were in operation around the world and the list continues to grow (Gauthier et al. 2013). Yet, despite being a relatively new and affordable means of transportation, concerns of inequity have been raised as many low-income and minority communities have not been served by or included in a number of bikeshare service areas.

Several comprehensive documents have been circulated to describe the modern bike sharing phenomenon and to assess the broad implementation and impact of bike sharing (Toole Design Group 2012; Shaheen et al. 2012; Gauthier et al. 2013). Bikeshare operators have faced several challenges in successfully implementing bikeshare programs including sustained operational funding, establishing partnerships with public transit agencies and institutions, ensuring equity and service access (Shaheen et al. 2012), and rebalancing the bicycle inventory (Gauthier et al. 2013).

Most guidance documents note the complexity associated with establishing a bike sharing network that reaches an optimal number of riders within a sustainable operating budget (Toole Design Group 2012; Shaheen et al. 2012; Gauthier et al. 2013). The resulting network is often "small, only covering downtown areas and immediately adjacent residential neighborhoods" (NYCDOT 2014), where stations are often located accordingly "because the high density and number of visitors were expected to produce

strong ridership [i.e. revenue]" (Glazier 2013). Furthermore, this network configuration is often at the expense of no stations serving low-income neighborhoods (NYCDOT 2014) or in communities of people of color (which tend to be associated with poverty) (Hoffmann 2013).

As a result, few low-income or minority individuals use bikeshare systems. The demographics of surveyed bikeshare users in four North American locations (Montreal, Toronto, Washington D.C., and the Twin Cities [Minneapolis and St. Paul]) were telling of the apparent inequity of many bikeshare systems. Respondents were under the age of 34 (80%), college-educated (85%) and white (near 80%), with incomes of $35,000 and above (85%) (Shaheen 2012). While the study did not note how these values compared to the respective data for the overall population, its authors observed that "more than 85% of the sample [had] a Bachelor's degree or higher—far exceeding the level of the general population (Shaheen 2012). Another study verified these trends, but with added nuance, observing that in Washington D.C., bikeshare users tended to be younger (under 35) than area bicyclists. Additionally, Asian individuals represented 3 percent of area cyclists [9% of D.C. Metro Area {U.S. Census, 2012 ACS}] but made up 7 percent of bikeshare members and 8 percent of short-term bikeshare users. African-Americans represented approximately 8 percent of area cyclists [26% of D.C. Metro Area] but only 3 percent of bikeshare members and 5 percent of short-term bikeshare users (Buck et al. 2013). Recent reports indicate that these demographics in Washington D.C. remain largely unchanged over the subsequent year (LDA Consulting 2013).

1.5   Barriers to Equitable Bike Sharing

In recent years, a number of detailed bikeshare planning documents have emerged; however, many do not provide comprehensive guidance on how operators should implement equitable systems. One document noted that bike sharing presents an opportunity to reach low-income and minority communities, but that securing a credit card has proven to be a major obstacle for many. It also noted that programs "should consider minority and low income populations early on, and tailor their strategies accordingly" (Toole Design Group 2012).

While the number of possible barriers to low-income and minority individuals is manifold, and mirror those to bicycling in general, most fall into one of three categories: Structural issues (e.g., physical access or logistical access), financial issues (e.g., user costs, lack of access to bank accounts), and informational and cultural issues (e.g. informational barriers, cultural barriers) (Glazier 2013; Kodransky and Lewenstein 2014; League of American Bicyclists 2014).

Physical barriers, such as the lack of stations in low-income communities, appear to be conceptually easier to mitigate; however, these barriers include "procedural and operational barriers" include access to the Internet or driver's licenses, which often required for account set-up and maintenance (Kodransky and Lewenstein 2014).

Financial barriers include the user costs, which are often too high for low-income users. As Kodransky and Lewenstein (2014) noted, "The pricing structure of many systems can also exacerbate the financial burdens of participation. Most systems require an initial lump sum membership payment, which is unlikely to be a priority for cash-strapped households." Furthermore, many low-income households do not have access to

credit cards or bank accounts. "This 'unbanked' population accounts for roughly 17 million people across the US – or 1 in every 12 households and largely consists of low-income individuals." (Kodransky and Lewenstein 2014)

The third category, informational and cultural barriers, covers a number of barriers closely related to the question of how bike sharing is perceived by underserved communities. Informational barriers (e.g., lack of information, understanding, and language translation) prevent potential low-income users from understanding the benefits of bikeshare or even how to use it. Cultural barriers include "distrust of authority, discomfort with shared mobility systems," or preference for more culturally acceptable modes of transportation such as cars. These cultural factors indicate that the general receptiveness or level of trust in bikeshare may be largely dependent on how its use could impact one's status among peers and the community at large. (Kodransky and Lewenstein 2014)

Not all barriers are limited to the user's perspective; some deter bikeshare operators from serving low-income communities. For many operators, providing a stable revenue stream is key to maintaining the program. "This challenge is made up primarily of two components: lack of demand (revenue) and increased liability and other associated costs (expenses)" often encountered with expanding into low-income communities. As has been common to most bikeshare systems, stations are often placed in areas with high activity and population density, sometimes with the intent that stations will be placed in less dense areas once the financial risk has decreased. Some researchers suggest that operators can reduce this risk by "increasing demand and subsidizing system operations through financial incentives. […] Helping users overcome barriers […] will also increase

demand, but may not be sufficient to assuage operators on their judgement risk." In cases where demand cannot be increased, operators may wish to consider subsidies and partnerships with transit agencies and housing authorities. (Kodransky and Lewenstein 2014)

It may be too early to tell how real the risk of damage to bikeshare assets may be in low-income areas. Whether the risk is perceived or real, many operators may be less likely to invest in low-income communities. "To address this potential hurdle, some insurance networks, such as the Alliance of Non-Profits for Insurance (ANI), specialize in covering shared mobility systems. (Kodransky and Lewenstein 2014)

Several bikeshare operators have implemented measures to reach low-income and/or minority populations (Buck 2012). Capital Bikeshare (Washington D.C.) offers the option to register via phone (Glazier 2013), and it partnered with a local financial institution to provide an account that eliminates the need for a credit card (Toole Design Group 2012; Glazier 2013; NYCDOT 2014). Operators of B-Cycle (Boulder and Denver, CO), Hubway (Boston) (Toole Design Group 2012), and CitiBike (NYCDOT 2014) have forged partnerships with financial institutions, housing authorities, or public health organizations to provide subsidized memberships.

One study investigated the status of equity programs of 20 North American bikeshare systems across seven categories, including "station siting, financial assistance, safe places to ride, interoperable farecard media, community-specific outreach, overcoming bicycling barriers, and contributing to the local economy" (Buck 2012). The report indicated that a number of bikeshare systems have or are planning to implement equity initiatives, but that additional research was needed.

While a variety of efforts to reach underserved populations are being used in the cities that responded, a few notable case studies emerged. Nice Ride Minnesota (Twin Cities' bikeshare operator) located 30 stations (20 percent of their system) in areas in need and offered installment payment plans. Arlington County [VA] offered financial assistance, subsidized memberships, and provided tailored outreach to its non-English-speaking Latino community. Boston's Hubway provided subsidized annual memberships of $5 and free helmets to qualified low-income individuals. Montgomery County [MD] offered financial assistance, subsidized entire memberships for qualified low-income individuals, and offered "subcontracting procurement preferences for minority-owned small businesses." Similarly, in the category of "Providing Economic Contribution to Communities", Denver B-Cycle and Montreal BIXI excelled by recruiting employees by partnering with a local Goodwill Industries and youth-service program, respectively. (Buck 2012)

1.6 Alternative Bike Sharing

Another way that a few organizations have addressed barriers has been by embracing alternatives to or other models that engage underserved communities and assess specific transportation needs using the bicycle. In the Twin Cities [Minneapolis and St. Paul, MN], the Community Partners Bike Library (CPBL) reaches many underserved community members, that Nice Ride Minnesota had not previously been able to reach. The CPBL program, operated by the nonprofit organization Cycles for Change (C4C) focuses on "access, education and leadership" by partnering with 20 nonprofit and public organizations "to loan bikes to low-income" individuals. In addition

to offering a free long-term bicycle loan, the CPBL requires members to attend training sessions to learn how to ride and repair their bikes. (Cycles for Change 2013)

In summer 2014, Nice Ride Minnesota launched a pilot project called the Nice Ride Neighborhood (NRN) program (explored in more detail in **Chapter 3**). Similar to the CPBL, Nice Ride Minnesota partnered with various community organizations in an effort to reach underserved communities. The program has been viewed as largely successful in changing the perceptions of biking and creating a "communities that bike" in the Twin Cities (Martin and Haynes 2014).

The key to the success of the CPBL and the NRN program lies in the community partnerships. By directly engaging underserved through partners that already understand the needs of underserved communities and by utilizing existing partnerships, these programs were able to build trust and participation through relationships. (Cycles for Change 2013)

Though largely undocumented in English, a similarly low-tech approach to bike sharing has been widely successful in Buenos Aires, Argentina. Possibly one of the most equitable bikeshare systems in the world, Ecobici's bikeshare system is free (for up to one hour) to any resident with a proof of address. Not only does this subsidized system universally allow for all residents to equally benefit, but its mix of automated and manual stations provides alternatives to access. (Gartner and Ochoa 2013; Ecobici 2015) In addition to its recently installed automated kiosks, Ecobici employs manual stations where "an attendant records the user's information and helps with checking in or out the bike." (Wright 2012; ITDP 2015).

Buenos Aires' treatment of bikeshare as a form of public transportation poses interesting policy questions for cities and operators in North America: How effective is subsidization in lowering the risk to operators when investing in underserved communities? How much of a system could or should be subsidized? What sources of subsidies are or could be available? Would a subsidized bikeshare be used differently (i.e., would underserved communities be more receptive)? It is likely no coincidence that after five years, "biking now represents 3.5% of all trips in [Buenos Aires]." (ITDP 2015)

The prospect of publicly funding bikeshare systems also raises questions related to environmental justice. The U.S. Department of Transportation and the Federal Transit Administration have established the following guiding principles:

- To avoid, minimize, or mitigate disproportionately high and adverse human health and environmental effects, including social and economic effects, on minority populations and low-income populations.
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process.
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority and low-income populations.
(Federal Transit Administration 2012)

While it is important to note that these principles apply to transit projects and programs that utilize federal funding, they are key considerations when considering what equity means in terms of providing transportation to the public. Some of the criticism that several bikeshare operators have received appear to be directly related to the second and third principles.

1.7 Can Bike Sharing be Equitable?

A majority of the efforts to reach underserved populations have been pursued with honest intentions; however, some critics have observed that bikeshare operators are essentially "retrofitting" cities [and their bikeshare systems] to be equitable after their

primary goals (e.g. attracting new talent and taxbase, serving those with a variety of transportation options, establishing a financially stable network, etc.) have been met (Hoffmann 2013; Agyeman 2014). These advocates postulate that the question of "How can we get more low income and people of color using our bike scheme?" be revised to "How do we move equity and justice to the center in designing just, equitable and sustainable cities [...]?" (Agyeman 2014).

"...we need to do a lot more (restorative) listening to those who are not using bike share. We need to know how they perceive themselves [...], where they feel they fit and how they might re-imagine/remake our cities and the places that they connect in their trips. Maybe then we can spend less time retrofitting equity and justice, and more time centering them as the basis for the design of sharing programs and who knows, ultimately sharing cities." (Agyeman 2014)

As the topic of equity has risen to the forefront of bikeshare system development, a few researchers have embraced the opportunity to explore the perceptions of biking and bike sharing in low-income and minority populations. These studies have confirmed the significance of many barriers to bike sharing such as safety, risk of theft, time limit, cost, and access to a credit card (Hoe and Kaloustian 2014; Stead 2015).

Possibly more important than the findings themselves, these studies suggest the importance of soliciting feedback from the members of underserved communities. Not only did focus group or survey participants in these studies offer new, creative ways to mitigate barriers, many provided valuable community context of the perceptions of biking and bike sharing in their communities. For example, some in underserved communities may be more interested in biking for recreational purposes than previously

assumed (Hoe and Kaloustian 2014; Stead 2015)—a realization that could dramatically change the way bikeshare operators and planners approach underserved communities.

While recent studies and a growing interest in alternative bikeshare models have helped paint a better picture of what residents of underserved communities consider important in a shared biking experience, more research is needed to gain a better understanding of what equity in bike sharing really means to underserved communities. Researchers should to continue documenting the perceptions of biking and bike sharing in underserved communities, but more importantly, practitioners need more comprehensive guidance on how to plan equitable bikeshare systems. While the bulk of this thesis document includes more commentary on the perceptions of biking, bike sharing and alternative models, it also includes several recommendations for practitioners and suggested areas for further study.

2   Methodology

Based on the review of existing literature and discussions with several experts on bicycling, bike sharing, and equity, a research approach was developed to solicit feedback from key community partners in an effort to better understand how bike sharing is perceived in underserved communities.

2.1   Central Questions

The goal of the study was to understand answer the following research questions:

- How do underserved communities, such as low-income and minority populations, perceive current forms of bike sharing?
- Are there replicable models that could more successfully engage or include these communities in all stages of the decision making process and during implementation of bike sharing systems?

2.2   Study Context

This study was conducted in two mid-sized urban areas in the north-central U.S.: Milwaukee, Wisconsin and Minneapolis and St. Paul (Twin Cities), Minnesota. Milwaukee was selected as the primary focus of the study as its Bublr Bikes system is one of the newest bikeshare systems in North America, and as it has a reputation as one of the most segregated cities in the U.S. According to research conducted by William Frey of the Brookings Institution (2010), Milwaukee had the highest rate of black-white segregation and ninth highest of Hispanic-white segregation for the 102 largest American metropolitan areas. It was assumed that the perceptions of bike sharing in underserved communities within Milwaukee are relatively fresh or nonexistent, so it would serve as a good example for other cities that are considering or in the early stages of developing bikeshare systems.

Minneapolis and St. Paul were selected based on their proximity to and perceived cultural similarities to Milwaukee. The Twin Cities are also home to a strong bicycling culture with active and vocal advocates. Lastly, Nice Ride Minnesota (the Twin Cities' bikeshare operator) is well-established. Its large-scale operation started in 2010 and it was one of the first modern operators in North America. Nice Ride Minnesota actively reaches out to underserved communities with multiple programs.

2.3   Research Approach Summary

The study included two phases to obtain the data needed to answer the central questions. First, in tandem with conducting a review of literature, a number of bicycle equity advocates and experts were engaged to get a sense of the current conversation of bikeshare and equity. At this time, key individuals at Nice Ride Minnesota and Bublr Bikes were interviewed to develop an understanding of each organization's approach toward equity.

Second, based on the input from the bikeshare operators and various advocates, a list of key stakeholders or community partners was compiled. Participants included representatives of organizations and agencies that focus their efforts and resources on low-income populations and minority populations. The list served as the population from which a sample of interviewees were selected (see **2.5 Interview Sample Selection**). The interviews included questions designed to answer aspects of the central research questions.

The findings included in Chapter 3 are a qualitative analysis of the responses to the interview questions noted in the second phase. The analysis involved comparing and

contrasting responses within and between the metropolitan areas and synthesizing these observations with relevant outside research as appropriate.

2.4 Interview Sample Selection

A total of 14 community partners were interviewed in Milwaukee and 12 community partners were interviewed in the Twin Cities. These interviewees were chosen from a composite list of a number of community partners. The initial list was provided by Nice Ride Minnesota and organizations; individuals were added based on feedback from other interviewees. The Milwaukee list was largely created "from scratch" based on the presumed parallel organizations.

The master list included 44 organizations from the Twin Cities and 42 organizations from Milwaukee. Organizations included social service providers, housing authorities, bicycle advocates, transit advocates, institutions of higher education, and other nonprofit organizations (see **Appendix B** for the complete list). Email invitations were sent to all organizations with an email address and interviews were arranged with respondents interested in meeting. For confidentially purposes the specific organizations that participated remain anonymous.

2.5 Interview Protocol

All interviews were scheduled via email correspondence prior to meeting. In most cases, a neutral location (e.g., coffee shop or restaurant) was proposed; however, many participants preferred to be interviewed at their organization's location. Interviews in the Twin Cities were conducted over three days in late November 2014; Milwaukee interviews were conducted throughout January and February 2015.

Community partners were asked a series of questions concerning their motivation for participating in programs offered by local bicycle advocates and bikeshare operators, their personal perceptions of the programs and various bike sharing models, opinions on the success (or lack thereof) of these programs, observations of how these programs are perceived by their members/customers, and any suggestions they may have for improving the programs. With a couple exceptions, responses were temporarily recorded in written notes and on a digital voice recorder (for the sake of accuracy).

2.6   Interview Questions and Rationale

The interview questions were carefully designed to prompt participants to consider how biking and bike sharing may be viewed by the people they serve. Topics included the following (see **Appendix C** for a full list of questions with rationale):

- The Community
- Transportation in the Community
- Bicycling in the Community
- Relationship with Bike Organizations
- Bike Sharing in the Community
- Barriers to Bike Sharing
- Future of Bike Sharing

Participants were also invited to provide their personal thoughts and opinions on the topics. The format was open-ended; the interviewer let the conversation flow in an open dialogue only to revisit the questions if the conversation diverged off topic too far or if a question topic had not been addressed. In one Milwaukee interview, the interview had to end early due to a time commitment. Interviews lasted between one and two and half hours.

3   Lessons Learned

The following sections use feedback from interviews with community partners in Milwaukee and the Twin Cities to answer the central questions of this thesis. The first part of the chapter explores how biking and bike sharing is perceived by underserved communities based on the community partners interviews. Direct quotes from interviews are shown in *italics* throughout the chapter.

The second part of the chapter discusses the importance of meaningful relationships and effective community engagement in working toward equitable biking and bike sharing including a critique of the assumptions bikeshare planners and decision makers appear to be making.

The chapter concludes with a discussion of the effectiveness and promise of alternative bikeshare models in better addressing the transportation needs of underserved communities. In this analysis, the feedback from interviewed community partners is cross-referenced with the findings of three recent studies from the Twin Cities, Philadelphia, and New York City.

3.1   Perceptions of biking and bike sharing

Studies indicate that several factors inform how individuals select the mode of transportation most conducive to their routine travel needs. Schneider (2013) suggested that people typically follow five steps when choosing transportation: awareness and availability; basic safety and security; convenience and cost; enjoyment; and habit. While in no particular order, each of these steps was observed in the interviews with community partners. As such, a wide range of perceptions of biking and bike sharing was observed largely dependent on an interviewee's experience and personal values.

It is important to note that while perceptions of biking and bike sharing are intrinsically linked, they each appear to have very different sentiments within the community. Practitioners may understand the finer nuance between biking and bike sharing; however, many community members may not.

3.1.1 Perceptions of biking

"It's something for kids. Like when we do a bike giveaway, we always get people coming in to get a bike for their kid."
– Twin Cities interviewee

"The teenagers, the kids, they have a different perspective; kids want to bike. The adults, think, 'Biking? Me?' It's something that just doesn't cross their minds."
– Milwaukee interviewee

According to many community partners, biking is largely viewed as a youth activity; one in which many adults do not consider participating. Many of the community partners represented social service or community organizations with a focus on youth and families. As such, many recounted stories in which children showed great enthusiasm for biking or examples of parents getting the first bike for their child. Several suggested that changing the perceptions of biking in underserved communities begins with capturing the enthusiasm of biking through that of kids and youth. Many interviewees suggested that biking as a family or community recreational activity shows a great deal of promise. Furthermore, many interviewees mentioned that advocates and planners need to provide more biking opportunities geared toward youth to increase physical activity (and health) and discourage juvenile delinquency.

When considering the perceptions of biking as an adult, one must first consider the greater transportation needs of the community. An exploration of these needs and the bicycle's role is complex and sheds light on broader concerns of inequity in urban

America. Residents of underserved communities often encounter compounded challenges that are often correlated with low-income and minority communities including low economic development, poor health conditions, and low levels of educational attainment (Corcoran and Nichols-Casebolt 2004). Transportation is no exception.

> *"Transportation defines what you do."*
> *– Milwaukee interviewee*
>
> *"Some people feel 'These are my circumstances. This is what it is. This is my life.'"*
> *– Milwaukee interviewee*
>
> *"Not a lot of people know their options. It's not talked about at home."*
> *– Milwaukee interviewee*
>
> *"If you're poor, you're riding the bus."*
> *– Milwaukee interviewee*

Many residents of underserved communities are captive transit users and may not perceive the concept of choice in the same manner that planners and decision makers do. By definition, underserved communities have limited options in terms of mobility, and many residents encounter a number of constraints and obstacles to getting around. With few options, the personal mobility and freedom for many of these individuals is at the mercy the transit system and schedule. For example, many may work late or multiple shifts that are not accommodated by frequent transit service, if any at all.

Several community partners explained that it is common for residents to transfer between transit routes as many as three times for one trip, and that commutes can extend well over an hour or two. Others may be the only parent or guardian available to care for a child after school or daycare. Many youth cannot participate in after school programs after which no transit service is accessible.

"I was just in Atlanta and they have the MARTA. Or Chicago has the El. There you have more other ways to get to certain places. Milwaukee has basically the bus line[s] and that's it. [...] We have here [in Milwaukee] transient populations. Many families have a kid that will [end up] going to four or five different schools [at different parts of town] before they graduate. This really limits what people can do."
– Milwaukee interviewee

"Bikes are great, but they're not a good choice if you're elderly and even, quite honestly, if you're younger in the neighborhood, more like the grade school age. [These groups are] often left out of conversation."
– Milwaukee interviewee

Members of underserved communities are forced to prioritize routine trips based on whatever transportation is available. Several interviewees shared anecdotes in which people are forced to find creative ways to patch together trips; many community members enlist the help of friends with a car or call a taxi to get home when dependable transit service is not available.

"There's not a lot of listening to what the community is talking about. Maybe the community does not want this [bikeshare]. [...] There are other things that need to be fixed; [biking] just might not be high on the priority list. [...] You need to frame around that."
– Twin Cities interviewee

While access to jobs and essential trips appear to be the primary transportation needs of underserved communities, other socioeconomic challenges present obstacles to biking as well. Interviewees noted that poverty, unemployment, homelessness, juvenile delinquency, disparity in the justice system, childhood obesity, and beginning and end-of-life care each factor into how people do or do not choose the way they get around. Furthermore, several interviewees noted that decision makers often neglect that some of the needs and context are unique to particular communities or neighborhoods.

3.1.2 The Car is King

"The Car is King; owning is a dream often before owning a home. Not having a car limits your world."
– Milwaukee interviewee

"Everyone wants to be Number One, regardless of race. The media image is that if you have a car, it shows you're doing good."
– Milwaukee interviewee

One example in which context plays a key role in the perception of biking is the significance and symbolism associated with particular modes of transportation. Interviewees confirmed that the "Car is King" in underserved communities—at least in Milwaukee and the Twin Cities. The personal automobile is as much a symbol as it is a tool. Among many things, it signifies status, mobility, employment, and financial means. While these may not differ from the symbolism seen in popular culture, it is much more tangible and definitive in underserved communities.

"You have to have [a car]. It's not an option; it's a necessity. Some people say they [otherwise] feel like a black bean in white rice."
– Milwaukee interviewee

Having access to a car is seen as a necessity. For those living in areas with limited transit service, access to a vehicle substantially improves one's ability to work, recreate, seek education, and provide for his or her family. It means a person can make trips when and how they choose. They can go to the grocery store for food. They do not have to walk as far. For many in underserved communities, obtaining a car is literally a vehicle toward a better life (i.e., graduation to a higher class or status). Several community partners also noted that obtaining a driver's license and access to a car is one of the first actions taken by recent immigrants.

A number of interviewees noted that the status of the car in underserved communities often comes with unanticipated costs. Several shared examples of the financial burden of owning a car including repairs, insurance, fuel, and parking. However, many residents take advantage of various transportation grants and assistance to offset these costs. Some interviewees also noted that persons of color frequently experience an increased risk of being pulled over by police when driving. Despite these possible deterrents, the personal value of a vehicle is widely understood, and car ownership is highly sought in underserved communities.

3.1.3   Perceptions of those who bike

> *"Once you get past the agreeable head nod response [with respect to whether they are interested in biking], nine times out of ten, the conversation goes 'Well, if I don't have to bike, why would I? This is great, but I'm doing this because I don't have a car.' […] 'I'll do this if I'm in a pinch if I don't have bus fare.'"*
> *– Twin Cities interviewee*

> *"Biking is for people who are in a pinch and it's faster than walking, for whatever reason. Maybe they don't have bus fare."*
> *– Twin Cities interviewee*

A number of factors influence an individual's choice in transportation. Two key considerations are convenience and cost. People tend to use modes that that require less time, effort, and money; and many gravitate toward "modes that involve less cognitive effort to use" (Schneider 2013). Feedback from interviewees suggests that the convenience and costs associated with public transportation and the car are familiar and known variables in underserved communities and biking is simply not competitive on those factors.

"First you have get past the stigma associated with riding a bike: That you have a DUI, that you're a drug dealer, it's a stolen bike, it's a kid's toy, you're sweatin', you can't afford a car, you can't afford the bus. [...] The majority of people we're trying to get to get to bike are sick of riding the bus, or their commute is just a few miles, you should try this out. Or they've been told by their doctor that they need to get some activity."
– Twin Cities interviewee

Furthermore, individuals are more likely to choose modes that are enjoyable: Providing "personal physical, mental, or emotional benefits; helps them achieve social status; or makes them feel good about benefitting society or the environment." (Schneider 2013) Most interviewees agreed that it is not considered the norm and that the motivation for an individual to bike is not widely known by the community at large. Interestingly, while having access to a car may indicate that an individual is of higher status, getting around by bike does not necessarily equate to being seen as poor. That status appears to be more closely related to riding the bus.

Many interviewees were cyclists, but they considered themselves anomalies in their respective communities to an extent. Some of these individuals start biking to save money on transportation costs or simply by circumstance. Others make a conscious decision to bike to realize other benefits (e.g., physical activity, environmental stewardship, etc.) that are often promoted by bicycle advocates. In many cases these cyclists view biking as a point of pride. A few interviewees noted that the personal value or benefits of biking is largely unknown to underserved communities because advocates and planners do not have a relationship and therefore do not understand the day-to-day needs of community members.

"The idea of a bike as a choice isn't that great. People who are bikers are kinda crazy. Kinda nutty."
– Twin Cities interviewee

"The 'poor bastard' assumption is more from the outside."
– Milwaukee interviewee

"It may start one way, then becomes a choice or option."
– Twin Cities interviewee

At least two interviewees suggested that there is a certain finesse to expressing personal style in underserved communities, particularly in some African American communities. They noted that a hairstyle or the style of clothing is an expression of "sticking out in a good way" and that one never wants to "stick out in a bad way" [as quoted by a Milwaukee bicycle advocate]. One community partner stated that this is the same rationale used for cars and smartphones. People on bikes stick out, but whether it is good or bad depends on the context and whether it is generally acceptable in a particular neighborhood.

"[You] don't want to stick out in a bad way, but in a good way. There needs to be a coolness factor. Kind of like when you see a guy in a nice suit."
– Milwaukee interviewee

"It requires work to be on a bike. This generation now is not a healthy generation. You have to have that lifestyle. Behavior needs to be introduced into the family. You have to start early. It's like reading. You need to instill a love for the activity. Help them find a purpose for it."
– Milwaukee interviewee

Clarifying the cultural value of biking in underserved communities appears to rely largely on making these benefits accessible to individuals and changing behaviors to make bicycling a more acceptable activity in the community. Most interviewees agreed that members of their community would benefit from biking; however, the community needs to be included in identifying the benefits.

3.1.4 Perception of bike sharing

"Green bikes [bikeshare] are white bikes."
– Twin Cities interviewee

"[Bikeshare is] for white hipsters – guys with ironic mustaches."
– Milwaukee interviewee

"[Bikeshare] is for a demographic that doesn't need to be convinced."
– Milwaukee interviewee

"[They're] not sure how to use [bikeshare], but it's interesting. 'What does it do? Is it for recreation?'"
– Twin Cities interviewee

The benefits of biking in underserved communities are increasingly becoming more known largely due to behavior of the pacesetting individuals mentioned above and other bicycle advocates; however, the benefits of bike sharing are much less clear or considered by many community members. While many community partners are aware of the benefits of biking and are willing to advocate for it, most agreed that bike sharing is largely seen as a novelty exclusive to white people. In the Twin Cities, many interviewees shared anecdotes in which bikeshare stations were placed in underserved communities, but residents were not sure how to use it or what purpose it served. Some community members showed concern that bike sharing stations were a sign that the neighborhood was going to change (i.e., gentrifying). This is discussed more in the next section.

"This is for people with means. A bus pass more valuable"
– Twin Cities community partner

"They're [bikeshare operators] not comparing to price point."
– Twin Cities interviewee

"Why would you pay to ride a bike?"
– Twin Cities interviewee

Another consideration interviewees raised was that the price structure of bike sharing may not adequately reflect what residents in underserved communities are willing or able to pay. Despite the limitations of transit in underserved communities, many interviewees noted that public transportation is a necessary evil, or at least, a known variable. Community members understand its benefits and intimately know its limitations. If the price point of bike sharing cannot compete with public transit (or other modes of transportation), research suggest that people will not use it for routine trips (Schneider 2013; Goodman and Cheshire 2014; Hoe and Kaloustian 2014).

Community partners confirmed that many community members rely on public transit, and that the cost of a bus pass is a known variable with respect to a monthly budget. The comparative value of bike sharing is much less clear to community members. Residents do not have a clear understanding of what money spent on bikeshare means in terms of trips or distance purchased in the same way as a bus pass or money for fuel does.

Feedback from focus groups in a recent study in Philadelphia support these observations. Participants offered that the cost of bikeshare needed to compare to that of local transit. Many suggested that the price point needed to be less than transit fare. (Hoe and Kaloustian 2014)

> *"People are concerned with time. Car and transit rules and routes are a known thing."*
> *– Twin Cities interviewee*

> *"My latest success story is of a gentleman who had a 45-minute walk to work and after we gave him a bike, it only takes him 12 minutes now. The time it saves him now uses to pick up his autistic son from the bus after school. Something he could never do before."*
> *– Twin Cities interviewee*

Interviewees also indicated that time is a valuable resource in many underserved communities. While biking can often be "more time-competitive with or faster than traveling by automobile", it is not suited for all trips (Schneider 2013). The time to plan trips or travel did not frequently come up in conversation, and few interviewees raised concern for the time restrictions of bikeshare. However, many interviewees offered stories of residents placing high personal value in time, and noted that bikeshare needs to be convenient for potential users in underserved communities.

Other research indicates that the time restrictions of bikeshare add a considerable amount of stress to users unfamiliar with the system (Stead 2015). Hoe and Kaloustian (2014) observed that focus group participants in Philadelphia felt that a 45-minute timeframe seemed "weird" and "felt like a scam." Interviewees in Milwaukee noted that whatever time limit is selected, it needs to compare to the cost per hour of public transportation.

3.2 Community Engagement

"We continue to underutilize, underappreciate the importance of relationships with the community."
– Milwaukee interviewee

"[They need to] talk with the people. We also need to figure out how to keep the communities engaged and keep the relationships. […] It takes a lot of time, but it's a very important piece. [..] You need to keep them engaged and involved. And getting more people from the community at the table."
– Twin Cities interviewees

"You're cutting people out by making assumptions."
– Milwaukee interviewees

One of the most important findings was that many community partners feel planners and bikeshare operators are making assumptions on how underserved communities may or may not use bike sharing without directly engaging community

members or their representatives. Virtually every interviewee stressed that the key to understanding the perceptions of biking and bike sharing—and to work toward equitable bikeshare systems—is to have a relationship with the communities in question. As two interviewees stated, *"They just don't have the relationship."*

3.2.1   Building trust

> *"Hosting organizations need to trust that those bicycles would be okay in that neighborhood. Trust that […] communities take pride when they are recognized as 'Oh, we have that?!' And then they get pride in having something that they see on the news or everybody's seen in in the paper. Now all of a sudden we have a station around the corner. The benefit of doubt that people that have good will and good intentions with something like that."*
> *– Twin Cities interviewee*

Any meaningful relationship begins with developing trust through honest dialogue, transparency, and invested time. Throughout the interviews, participants shared examples in which decisions had be made without meaningful community engagement. Not surprisingly, in almost every case, the example plan or project was met with confrontation or apathy. Several interviewees indicated that decades of such interactions with decision makers have led many in underserved communities to distrust the projects—and the agencies and organizations implementing them—that are being "injected" into their communities. Often, infrastructure changes such as bike lanes and bikeshare are viewed as a form of gentrification.

The following sections explore some of the false assumptions identified by interviewees, the context for current distrust, and areas in which planners and decision makers can forge meaningful relationships with underserved communities.

3.2.2 Outside assumptions

When considering the personal or cultural value of biking and bike sharing, one must ask "Whose values?" Bicycle advocates and planners have often made assumptions of how biking and bike sharing are perceived in underserved communities based on limited or broad data without actually engaging the community. These assumptions may lead to the personal values of advocates and planners prevailing over the needs and desires of the communities. Many community partners had strong opinions on what bikeshare planners and operators often neglect or assume when engaging disenfranchised populations. The following sections explore their feedback in greater detail.

Assumption #1: People in underserved communities "don't value the benefits of biking"

"[…] From black peoples' perspective, the whole concept of protecting the environment, the whole concept of being environmentally conscious, healthy, recycling, things of that nature, those are not really things that you're going to see my community thinking about much at a high level […] because those are issues that they weren't involved in creating […] And what you have is this huge inherent mistrust between brown people and white people. […] When it comes to something like biking, that's kinda something that white people are into and so it often times makes brown people somewhat standoffish, I think, in a somewhat unconscious way."
– Twin Cities interviewee

"You should be asking others 'What benefits do you see?' Not just having this one size fits all approach. You push more of these kinds of things if you do a better job of engaging the community from the beginning. Like, 'How can this be important to you?' instead of 'These are the benefits.' Then it would be something that they feel invested in. […] It's like house rules. Well, you're in my house, and this is what we do. Find out what their values are. […]
– Twin Cities interviewee

Several interviewees challenged that the benefits of biking may be seen as an example of outside (i.e., white privileged) values being imposed on communities. They noted that these benefits are sometimes viewed as solutions to "white people" problems—problems that white people created (e.g., climate change, obesity in low-income populations, and poverty)—, and it is unjust to ask disenfranchised members of society to bear the weight of addressing these problems. Still, many participants admitted that the benefits of biking are real for all individuals, and there is hope for activities like biking and bike sharing to catch on if engagement is approached in a way that includes the community and provides community members and leaders to find common cultural value.

Assumption #2: People in underserved communities "won't use bikeshare"

"[Saying] 'Nobody is going to use it' is wrong! There are lot of people that want to be healthy and do things with their family."
– Milwaukee interviewee

"I think people would [have an interest in bikeshare]. The people in this community never cease to amaze me. When I first heard about the mobile library [MPLX], I thought, 'people don't go to the library and don't read books.' But I am amazed by how many people and kids I see using it. [...] When people are exposed to new opportunities, they will take advantage of those resources."
– Milwaukee interviewee

A number of participants expressed concern that some bikeshare operators seem hesitant to place stations in underserved communities because they believe that people will not use them. One participant in Milwaukee compared such sentiments to the stereotypes that *"black people do not drink coffee"* or *"use libraries"*. He and others suggested that prejudices like these are borne out of ignorance and assumptions often made by those in decision-making roles. Community partners offered that when engaged openly, communities will take ownership of resources available. Two Milwaukee

interviewees noted the example of the Milwaukee Public Library Express (MPLX) at Silver Spring as an example of community members using resources to the fullest when made available. Launched in October 2014, the MPLX is "the Midwest's first fully automated 24-hour library", offering the surrounding neighborhoods (without access to nearby staffed branch library) a location to check out and drop off library books, CDs, and DVDs (Milwaukee Public Library 2015).

Assumption #3: People in underserved communities "don't want bike sharing"

"It's okay to have a program that serves only white people; as long as it's funded it equitably."
– Twin Cities interviewee

"Would these orange bikes [Nice Ride Neighborhood program] have been here otherwise? […] It's not just about 'giving' us this wonderful creation."
– Twin Cities interviewee

"Is this something we want? We might not want this."
– Twin Cities interviewee

"Consultants tell us what we can or can't do. When you're gone, we're still here. People aren't invested; not there to see it through. You gotta believe in it."
– Milwaukee interviewee

"[…] No focus groups, no studies […] that's where it gets dangerous. No one's asked what they want their neighborhood to look like. […] There comes a point when people aren't asked what their opinion is, that's when it's considered gentrifying."
– Twin Cities interviewee

Some interviewees believed that bikeshare planners and operators assume underserved communities do not want bike sharing. A few participants suggested that decision makers may not ask because they are afraid that bike sharing may be inherently inequitable, it may be viewed as an instrument of gentrification, or simply that the answer may be 'no'.

As one interviewee said, *"Gentrification is a huge deal."* As briefly noted in the literature review, many bicycle advocates and planners struggle with whether their actions gentrify the very communities they are trying to reach. While some interviewees agreed that bicycle infrastructure and bikeshare risks gentrifying neighborhoods, most also see value in getting more community members on bikes. At its core, biking has real benefits to individuals regardless of income level, race, or status. A few participants suggested that advocates and planners should focus on the fact that biking is simply fun and enjoyable.

> *"[The conversation] is dominated by white people and by white language and that culture that already exists. [...] trying to implant that culture instead of build a culture in and of itself. [...] We need to create access. [...] Have you ever heard of the Buffalo soldiers? [...] They were the first mountain bikers in the late 1800s that were exploring the ability of the bike as a military weapon. It was a full regiment of African American troops. Like, riding 1,800 miles up and over the continental divide. The most badass thing you'd ever see in your life! Whenever people say 'bikes are a white thing or bikes are for this or for that', I tell them these were the first mountain bikers and they were badasses. [...] It can be whatever you want it to be. Don't impose your culture; just create access. That's the idea. And just put people in charge that are passionate about it. "*
> *– Twin Cities interviewee*
>
> *"Focus on bicycling as simply being fun. I like to tell kids it's like their spaceship."*
> *– Minneapolis bicycle advocate*

A number of community partners noted that regardless of whether bikeshare may have some "built-in" inequity or risks of gentrification, underserved communities deserve equal access to it. One participant observed that even if the personal or cultural value of bikeshare is unknown or slow to grow at first, youth in underserved communities will grow up with it in the community and may very well use it.

"I don't think they will be used as much as in other neighborhoods and I don't care. We need to have the opportunity. The access needs to be here. It will take a while for people to get used to them, but people will use them. […] If anything, we're training the next generation."
– Milwaukee interviewee

3.2.3 Early communication and presence

Interviewees noted that the communities must be present in the conversation. They noted that members of the community need to be at the table during the decision making process for it to successfully address the needs of the community.

"If you only have the same people at the table. Otherwise, you can do the same thing and you're going to get the same results. […] You've gotta have people involved, early."
– Milwaukee interviewee

"If it's worth doing, you need to spend the time upfront socializing with the community. You need the community's help in interpreting the data and making decisions."
– Milwaukee interviewee

In addition to establishing relationships with communities, interviewees also noted that engaging stakeholders and community members early in the planning process is essential for building trust. As discussed later in this chapter, one of the major barriers to equitable bike sharing is a distrust of the system itself. Many interviewees described a long history of planners and decision makers developing alternatives and programs based on assumptions made prior to soliciting feedback from the community only to reach out to the community to determine why their systems and programs remain unused. Community members noted that trust can only be achieved by including the community in the decision making.

3.2.4   Listening and the hard conversations

"They often are talking to people like they care."
– Milwaukee interviewee

"It starts with the conversation. But you don't want it to a token conversation, where you just ask one person and then point to 'See, this is what the community wants!' That one person doesn't talk for everybody, but those people can certainly help you get that input."
– Twin Cities interviewee

"Listening is key. You need to sit down and understand; otherwise you're just guessing. It goes a long way."
– Milwaukee interviewee

In addition to providing communities with a greater presence earlier in the process, many interviewees also suggested that planners and decision makers need to also allow community members to be heard. Decision makers need to become better, more active listeners, and that they must respect the culture of and specific challenges facing the communities they are engaging. Some participants noted examples in which bicycle advocates and bikeshare representatives have made an effort to speak with underserved communities, but these decision makers did not take the time to listen to the responses or did not follow through with commitments made to the community.

"Is it [bike sharing] racist? It is!"
– Milwaukee interviewee

"We don't talk about race. White people don't have to know black culture, but black people have to know white culture. They [white teachers] don't have the relationships. False unspoken perceptions born out of fear. Fear causes anger."
– Milwaukee interviewee

"We really needing to be talking about how to get people from these communities to where the jobs are. […] We're always focusing on these new shiny things, without really addressing the big elephant—we have a huge transportation issue. […] We avoid the hard conversation. There's no momentum about how to meet the needs [of the communities]."
– Milwaukee interviewee

Furthermore, interviewees urged bike advocates, planners, and bikeshare operators to start having the "hard conversations" related to race, poverty, and inequity in America—and not just amongst themselves but with underserved communities. However uncomfortable it may be, the topic of racism cannot be removed from the discussion, despite some opinions that the disparity is more economic in nature (as suggested by a number of interviewees in the Twin Cities, but not in Milwaukee). Participants noted that while greater inequity concerns may not directly relate to specific aspects of bicycle infrastructure or bikeshare systems, there is a deep distrust borne out of decades of communities not having a voice.

3.2.5   *Communities understanding of barriers*

Much of the existing literature on bike sharing and equity involves ways to remove or mitigate barriers to low-income and minority populations. Several interviewees observed that bikeshare planners and operators not only appear to be presuming what barriers exist in underserved communities, but they are also guessing at the significance these barriers may or may not present in an individual's life.

> *"I'm never like build it and they will come. You need to figure out what they want built and how are they going to help build it. [...] Then they have to find other people who want to help them; build their own team to make things happen. [...] Then we help facilitate the meetings and get people connected. I could see that working here [for bikeshare], building a team to help identify barriers."*
> *– Milwaukee interviewee*

The following sections include commentary on some of the barriers discussed during interviews with community partners. It is important to note that participants believe community members can play an important role in weighing in on the significance of the barriers and in identifying other barriers. Furthermore, interviewees noted that the communities' involvement need not be limited to identifying barriers or

providing input, but that community members are instrumental in generating ways to mitigate barriers.

Safety

Almost every interviewee noted that the most significant barrier community members face is safety. Safety concerns were described in in terms of infrastructure, traffic, personal safety, and theft. Many participants described roadway conditions as hostile toward biking with aggressive, speeding drivers; deep potholes; and in many cases, no accommodations for bicyclists. Interviewees noted that a large number of residents do not know how to bike, what routes to use, or acceptable "rules of the road" for cyclists.

> *"Drivers on the North Side aren't used to seeing bikes. They don't see them as vehicles or transportation. They see them as kid's toys. They should be on the sidewalk. They think biking is dangerous, and they tell their kids that. Everyone wants to protect their own kids. So they don't let them explore to the limits that their bodies are able to do." – Twin Cities interview*

> *"About safety... You put these bikes here, there's a lot to figure out. I need to figure out how to do this bike lock. Even making sure that people understand where to ride and the signaling, you know."*
> *– Twin Cities interviewee*

> *"Safety comes up a lot—on a couple of fronts. One things is the traffic on Silver Spring is just so bad there, even with the bike lanes, it's ridiculous. [...] So safety in terms of traffic. There are also instances where people have had the bike stolen—while they were on it. There are also concerns about people feeling safe while waiting for the bus." –Milwaukee interviewee*

"Talk about traffic. The amount of car traffic, bus traffic at 27th and North, it's busy. […] Do you feel safe riding in the neighborhood and on those streets? […] A lot of times you do see people in inner city neighborhoods on bikes being salmon, going upstream. To them that's the perceived safe way to do it. A lot of people driving through those neighborhoods […] aren't the best drivers. A lot of times the roads are narrower, the roads are in poor condition, so the driving is different. […] A lot times you look over [at the drivers] and it's not the inner city drivers, driving like that. It is someone who that is there commute and they are <u>extremely</u> aggressive driving. You realize that this person doesn't life on 27th and North. They want to get through as fast as possible. […] "
— Milwaukee interviewee

Interviewees also shared that many community members are concerned about becoming victims of violent crimes, harassment, or theft while biking. Many participants shared stories of rampant bicycle theft in their community. Others noted that loan or giveaway bicycle programs must include bike locks. While few interviewees expressed concern that bikeshare bicycles do or would be stolen or vandalized in Milwaukee and the Twin Cities, a recent study in Philadelphia indicated that many focus group participants expressed concern that bikes would be stolen at stations or even from riders en route (Hoe and Kaloustian, 2014). Some focus group participants speculated that vandalism or mistreatment of bikes relates to potential users not having personal ownership of the bike.

"Almost every kid I've worked with here has gotten their bike stolen. Sometimes a kid will just stop to run to the corner store to get something to drink. A lot of times they'll just leave the bike outside the door, run inside to grab something, and the bike's gone. Just after a couple minutes. […] Bike theft is rather rampant. It is an issue. […] Opportunity of need. You may be driving around in a stolen minivan, but you're like 'Hey, I got it.' […] Same thing with a bike. A lot of times kids come in and say that they got their bike stolen. They're not saying it with a lot of anger or a lot of sorrow, they're just stating it matter of fact. Because it's not out of the ordinary. A lot of times they'll just steal someone else's. 'I'm going to get a bike back.' It's almost bikeshare."
— Milwaukee interviewee

Two interviewees in Milwaukee also noted that women in particular encounter unsafe situations in some areas and avoid venturing out alone. One participant noted that Hispanic/Latina women in particular are often victims of harassment in the form of "cat calling" (or worse) while walking, regardless of whether traveling alone or in a group with other women.

> *"In the walkability assessment, we saw that [instances of] harassment [toward women] were high. Guys will be 'cat calling' from the side or from cars. [...] I don't even like walking down here, and it's only one block. It's not a nice walk. I'll have like five guys saying something or looking at me in a way that's uncomfortable. [...] People have gotten used to it here. They feel like it's normal. But it's not."*
> *– Milwaukee interviewee*

Station locations

Likely the most obvious barrier, community partners agreed that having access to bikeshare stations is a key step toward reaching underserved communities. However, interviewees from the Twin Cities noted that placing stations in these communities does not necessarily mean that people will use bikeshare. Potential users need training and encouragement to discover how to use bike sharing and how they may benefit from using it. It is more than knowing where stations are located.

> *"Having station in the community is important, but learning where stations are can be difficult."*
> *– Twin Cities interviewee*

> *"It's not just about getting on a bike and riding it; there are things you need to know. Things that might intimidate people. Putting it here doesn't mean they're going to use it."*
> *– Twin Cities interviewee*

Some noted that it is very important to pair bike sharing with transit operations. Many community partners in the Twin Cities observed that bikeshare stations seem to be conveniently placed near major bus and light rail stops. Several interviewees noted that in

is important to include stations in nearby neighborhoods to help close the "last mile" problem in areas where transit does not adequately reach into the neighborhood.

Socioeconomic barriers

As previously noted, cost and convenience play an important role in how people choose their transportation. Evidence suggests that other socioeconomic factors (e.g., age, gender, household size, employment status, income, household automobile ownership, and physical disabilities) may also influence individual decisions made toward transportation modes (Schneider 2013). The complexity of compounding factors such as poverty, single-parent households, unemployment, lack of vehicle availability, physical disabilities, and other challenges unique to areas of lower socio-economic status may be a key barrier to bikeshare, especially in terms of its cost. For example, when the cost of bikeshare in London (U.K.) doubled, it became less competitive with transit for low-income individuals resulting in a disproportionate decrease in use by residents in poorer areas. (Goodman and Cheshire 2014)

> *"The other issue is credit card. [..] People don't have credit cards; they use cash. There's not trust in the transaction."*
> *– Milwaukee interviewee*

> *"It's a cash economy here."*
> *– Milwaukee interviewee*

Interviewees confirmed that socioeconomic barriers are real and disproportionately prevalent in underserved communities. Not only did they verify that many residents do not have credit cards or bank accounts, but many neighborhoods operate in a cash-exclusive economy. To that affect, many community partners questioned whether the current bikeshare model may be inherently inequitable with respect to low-income populations.

"Internet access isn't as much of an issue, as much as proficiency. People often come to our computer classes with a wide range of experience. Bikeshare could be pretty complex for some of them."
– Twin Cities interviewee

"You can't just email them [participants of NRN program]. Those folks don't have email. [...] We just had to reach out and make sure people were going to come."
– Twin Cities interviewee

"With smartphones, it's just not as much an issue anymore."
– Milwaukee interviewee

While not inherently socioeconomic in nature, access to Internet has been grouped with access to credit cards and bank accounts. Interviewees noted that access to the Internet is increasingly less of a barrier for many in their communities. One recent study supports this finding noting that that low-income communities access the Internet more commonly via smartphones or public sites such as libraries as opposed to personal commuters (Smith 2015). However, some community partners suspected that many community members may not use the Internet to manage accounts similar to bikeshare memberships, and there is a wide range of proficiency in how individuals use the Internet. They suggested that decision makers should take the time to verify this assumption.

Distrust of the system

While not often discussed as a barrier to bikeshare, according to some community partners, the aforementioned distrust in the planning process also translates into a distrust of the bikeshare system itself. Some interviewees noted that some community members distrust the types of technology used in the kiosk bikeshare model. Community members may question how their information will be used or stored. As previously discussed, others may be concerned by the prospect of holding charges or fees, despite whether

there is a risk for such costs. Some community partners suggested that operators and planners be creative in providing assistance at kiosks or developing alternative payment systems.

"The system itself is the main barrier. People are note used to using that kind of system or sharing bikes. 'Can I really use this system? Is this bike mine?'"
– Milwaukee interviewee

"Whether it's real or not, there's a perception that it's complicated. Tech-heavy. […] What would be interesting to me, was if you look at what some civil institutions, like public library systems, like what Milwaukee is doing with the one on Silver Spring [MPLX]. Other libraries are doing interesting things at various levels of civic engagement for access. There are other libraries that will loan you land. The library owns it, and you can check it out and grown plants and vegetables on it. Can we do that with bikes? Can we explore other civic engagement tools where the access barriers are less? […] There's a public institution that most people trust, that you have to have a library card. There's a process to getting it, but it's not an onerous one. Go to the library downtown and check it out. That is the biggest slice of life you'll find anywhere in Milwaukee. So those barriers are real, but I think they're surmountable.
– Milwaukee interviewee

"There's a fear of how information will be shared."
– Twin Cities interviewee

"I have to stick my card in this machine and I have to trust it? There's no one there to give me a receipt or anything like that. It reminds me of when I had to park with one of those little automated ones downtown. I had to ask myself, 'Is this transaction legit? Am I okay? Am I still going to get a ticket?' You're doing a transaction on your credit card with no human being present. […] You go to an ATM going to get some money and you know the bank isn't going to screw you over. But there's always that thought in the back of your head, "Am I going to get my money out? What if it screws up?' What am I getting? Will it be there when I need it?"
– Milwaukee interviewee

"What if they were put near places like the park or outside of businesses that could help at the kiosks from businesses? […] What if you got youth from the high school and communities to help, like valets? "
– Milwaukee interviewee

In Philadelphia, Hoe and Kaloustian (2014) encountered elements of distrust in terms of the dependability and customer service of the bikeshare experience. A number of focus group participants seemed concerned with whether a bike would be available when they needed it. Some also asked what to do if they encountered mechanical issues. Many of their focus group participants appeared to have strong opinions on insurance and liability in cases of a crash or theft. During three of the focus groups made up of women, participants raised concerns of not being able to talk with a real person should they encounter problems.

Cultural practices

Barriers related to social and cultural practices frequently arose during conversations with community partners. While many of these practices may at times be uncomfortable to discuss, understanding their significance is incredibly important when engaging community members in a meaningful way. In the Twin Cities, a few interviewees noted that traditional Muslim clothing, such as the *hijab,* may inhibit women from using helmets or biking all together. Some noted that they have witnessed several presumably Muslim women biking. One interviewee also noted that the *hijab* may not simply represent a physical obstruction [to a helmet], but also a cultural one in which, to some, it may not be considered culturally acceptable for women to bike.

> *"Different culture groups view biking differently when they get into adulthood. For our Muslim residents, biking is viewed as a way in which a women can show off her body to a man so it's taboo. However, we had young adult Muslim women who participated in our [biking program]. So it kind of depends on what generation you're coming from and how you interpret the culture. At another site we had a Muslim woman who wanted to join but didn't want to be seen in public because she didn't want to be viewed differently. She wanted to be a role model for her teenage daughters to show them that it's good to be interested in increasing their physical activity. [...] She ended up dropping out of the program [for other personal reasons]." – Twin Cities interviewee*

Another barrier that arose in a few interviews related to the significance of hairstyles discouraging women, particularly African American women, from biking. While many interviewees did not have a strong sense the prevalence of hairstyles preventing women from biking, a few noted that it is much more significant than many people want to discuss. In several conversations, the discussion quickly called into question beauty standards for women in America and how they relates to transportation options for women.

> *"I've heard about elsewhere, but not here, about African American women not biking because of their hair. There's worry about what a helmet is going to do to their hair or what riding is going to do to their hair. It's been shown in some studies to be a big barrier in women biking."*
> *– Milwaukee interviewee*

> *"I don't want to overplay it, but it's a factor. There is time and money invested. It also makes you wonder about women and beauty standards in America."*
> *– Milwaukee interviewee*

While the significance of African American hairstyles has not frequently entered the arena of transportation or bicycle planning, Versey's (2014) conclusion applies to how bikeshare planners and operators potential barriers such as these:

> By placing the real barriers some women face within a social context, it is possible to understand physical activity disparities from the standpoint of Black women. If public health is to be transformative in moving inactive women to activity, culturally competent strategies must be developed with these concerns in mind. Only then can interventions effectively have an impact on the health of Black women and, by extension, Black families and communities.

Language

Both metro areas are home to non-English-speaking populations. Most interviewed community partners representing Spanish-, Hmong-, or Somali-speaking communities noted that they were not aware of whether bikeshare kiosks had translations available. Several stated that they regularly experience examples of incorrect translations

and interpretations of materials intended to reach non-English speakers. Two representatives of communities with non-English speakers suggested that less emphasis and effort should be placed on providing comprehensive translations of material. Instead, bikeshare operators should explore less complex, graphic-heavy material. As one interviewee noted, similar to the discussion on Internet access, even many English-speaking residents have low reading proficiency and that a "picture tells a thousand words."

> *"Number One: Everything is in English, so if you don't speak English…[trailed off]"*
> *– Twin Cities interviewee*
>
> *"I tried to use the Spanish [translation] at Discovery World [pilot bikeshare station], and it was awful. It was a different translation. It charged my credit card but didn't give me the bike. It ruined our ride that day because we purposely went without bikes to use the system and it didn't work."*
> *– Milwaukee interviewee*
>
> *"The kiosks are very wordy. It might be more beneficial to make them picture-based."*
> *– Twin Cities interviewee*

Weather/climate

Most conversations focused on barriers related to safety, socioeconomic disparities, and cultural practices; however, a few interviewees noted that the northern climates and harsh winters in Milwaukee and the Twin Cities play a major factor in community members' transportation choices, especially with regard to biking. Travelers tend to gravitate toward transportation they view as most reliable and with the most convenience. Interviewees suggested that in addition to being potentially hazardous, biking in the winter may be considered by many community members to be unreliable and inconvenient.

3.2.6   The bike sharing experience

"We [need] to talk to actual users of the system. What is the experience?"
– Twin Cities interviewee

"The experience is very key. When people are talking about providing something a lot of times they like to come in and talk to the community and have these big sessions where we have these exchanges of words. When you have outside people coming in, often there's a feeling of handouts and things like that. If you have the experience, then you're kind of able to push past those negative stigmas and just be able to enjoy the resources."
– Milwaukee interviewee

"We wanted to develop community leaders. [...] Our program grows in ways the community wants to expand. [...] The goal is for them to take initiative and ownership—to be empowered. They form clubs [...] seek grants [...] be part of committees. [...] One of them started a biking club. [...] The community voices are at the table."
– Milwaukee interviewee

Another important consideration when engaging underserved communities in the bikeshare planning process is to effectively convey the experience of bikeshare. Several interviewees observed that when community members can expect a positive, enjoyable experience—both in the decision making process and as bikeshare users—they are more likely to take ownership and responsibility of it as an institution in their community.

Community partners suggested providing fun-filled, family-friendly activities and "piggybacking" other neighborhood events when engaging the community. They noted that focusing on the experience of bikeshare creates a narrative that can be shared with friends, families, and neighbors. The momentum of this community-based, grassroots advocacy can be disseminated throughout the community and into a greater conversation of decision making in their community.

3.2.7 Importance of intermediaries

"When you're at looking at community, it is important to use the already established relationships—and getting those people involved before you take it to the community."
– Milwaukee interviewee

"Who's disseminating the information? You need to send the right person; right person to sell it. Know your audience."
– Milwaukee interviewee

Interviewees shared an overwhelming sentiment that bikeshare planners and operators must forge relationships between their organization and underserved communities directly; however, recent research also indicates that bikeshare operators stand to benefit from leveraging the relationships between intermediaries and the communities they serve (Kodransky and Lewenstein 2014). Many community partners confirmed that including organizations like theirs in the bikeshare planning process can be incredibly valuable toward reaching their communities.

During the interview phase, it quickly became apparent that community partners have deep and meaningful relationships with the people they serve. Not only did these individuals have a comprehensive understanding of the specific needs of the communities at large, but they frequently interact with community members on a personal level. It was clear that their work matters a great deal to them, and that they want the stories from their communities to be known and shared. The success of many community partner organizations can be attributed to the efforts of these individuals. Most seem to be part of an extensive network of other individuals with a passion for similar causes (e.g., social justice, homelessness, workforce development, youth engagement, etc.), and many also provide a channel between the community and their elected officials.

"We want to create responsive advocates that have relationships with alders. The goal of these programs should be to build community/cadres."
– Milwaukee interviewee

"A big part of our program is to train and employ youth from the community. […] Currently, we have a session from a job placement skills place and they serve at-risk young men with criminal records that have a strong tendency to go back on the streets. Many go on to stay employed."
– Twin Cities interviewee

Community partners are, or would be, the strongest advocates for biking and bike sharing in underserved communities. Not only can they help in identifying potential barriers to bikeshare, but many are willing to participate in outreach activity, especially when the goals are common to their own. For example, youth and neighborhood organizations stand to benefit from bike and bikeshare programs in their mission to engage youth and families. Similarly, public health organizations can use biking as efforts to increase physical activity and reduce health risks often correlated with underserved communities. During interviews, many community partners offered that they would be very interested in partnering, or continuing their partnership, with the local bikeshare operator. Several expressed excitement at the prospect of assisting with programming. One Twin Cities' participant observed that doing so provides a great opportunity to engage their community and get community members excited about something happening in their community.

"This was an opportunity for us [community partners] to engage the community. People began to talk about what they could do next or make [NRN program] better next year. […] People were kind of excited to be doing something different. […] Events were key."
– Twin Cities interviewee

*"People really got behind the programming [that Cycles for Change offered].
Even had a bunch of people winter biking. People liked the different renditions of
things to do."*
– Twin Cities interviewee

Kodransky and Lewenstein (2014) support these observations, noting that:

> …an intermediary can play a key role in implementing outreach and education
> programs to share knowledge of the system itself, available subsidies, or logistical
> fixes […] They may also provide new avenues for financial support by tapping
> into non-transit funds such as community health or community focused grants.

3.3   Alternative models of bike sharing

When this study began, existing literature indicated that there was little variation
in the bikeshare model. Most, if not all, North American bikeshare systems had graduated
from predecessor models, in which bicycles were coin-operated or sometimes more
casually shared among community members, in favor of self-serve, automated kiosks.
Some guidance documents indicate that the bikeshare industry may eventually transition
toward "station-less" models (similar to car share systems such as Zipcar) in which
bicycles could be unlocked remotely without the need of kiosks or docking racks (Toole
Design Group 2012). While this model has been tried in a few instances, it appears that
many new bikeshare operators, including Bublr Bikes, prefer the "kiosk model".

Interviews with a number of bicycle advocates revealed that a few organizations
in the Twin Cities (and likely elsewhere) have offered long-term bicycle loans or Earn-A-
Bike programs such as those of Cycles for Change, Venture North, and even Nice Ride
Minnesota. While many of these advocates stressed that these programs are very different
from bike sharing, "fulfilling different niches and areas", the concept piqued the interest
of several interviewed community partners. Many noted that they appreciated the

flexibility these programs offer in terms of types of trips, the ability to ride as a group or family, and the focus on bicycle training and education.

The following sections explore the perceptions of other models, such as long-term bike loans, based on a recent study of the Nice Ride Neighborhood program and feedback from interviews with community partners in Milwaukee and the Twin Cities. The discussion also includes other improvisations on the current bikeshare model based on studies in Philadelphia and New York City.

3.3.1 *Long-term bike loan programs*

As noted earlier in the document, the nonprofit organization, Cycles for Change (C4C) in the Twin Cities operates the Community Partners Bike Library which offers seasonal bike loans to "low-income community members, in particular those traditionally marginalized from the cycling world, including immigrants, women and communities of color." Possibly the most innovative aspect of the program is that it relies heavily on the involvement of its community partner organizations (similarly defined as in this document).

The Twin Cities' bikeshare operator, Nice Ride Minnesota, launched a similar program, called Nice Ride Neighborhood (NRN), in summer 2014 partially as a result of a system optimization study (Community Design Group 2012). In this study, Nice Ride acknowledged that one of its service sub-systems included "Regional Equity / Underserved, Transit Dependent, and Health Disparity Demand" which would result in negative revenue. When asked, Nice Ride staff noted that as a nonprofit organization, it has made a commitment to providing equitable access to its services, though they prefer to avoid denoting any program as an "equity program."

Be that as it may, the NRN program offered a fresh perspective on how bike sharing can be approached differently—perhaps more equitably—than only focusing on removing or mitigating barriers. Much of the following sections includes feedback from interviewed community partners as well as findings from the final evaluation report of the NRN program sponsored by Blue Cross Blue Shield Minnesota and prepared Martin and Haynes (2014) of the University of Minnesota Urban Research and Outreach-Engagement Center (UROC) & Minnesota Evaluation Studies Institute (MESI).

Program description

As described in the evaluation report, the NRN program was a pilot project involving "longer-duration bike lending within a targeted geographical neighborhood [North Minneapolis, Frogtown, and East St. Paul]" from July to October 2014 (Martin and Haynes 2014). The program used "specially designed orange bicycles" that were distributed to participants via community partner organizations or "liaisons". The bicycles differed from Nice Rides "kiosk-based" bikeshare bikes (i.e., "green bikes") in many ways, most importantly in that they did not need to be returned to a dock and there was no payment mechanism. For all intents and purposes, the bikes were the personal responsibility of the user. Each participant was offered training and in completion of the program would receive a $200 voucher at bicycle shops located in their community. As noted in the evaluation, participants were also required to meet the following to earn the voucher:

- Attend an initial orientation;
- Ride the orange bike at least two times a week;
- Attend a minimum of four group ride events;
- Attend a final closing event to return the orange bicycle.

The following sections include topics in which NRN findings and recommendations and feedback from participants in this thesis shared common findings. This, however, should not be viewed as a comprehensive assessment of the NRN program; it is a commentary on the elements of the program that may be most conducive in developing equitable bikeshare practices.

Entry point to biking and bike sharing

While the NRN study did not note any drastic change in the use of the kiosk-model bike sharing by participants, it did indicate that some participants thought more highly of the "green bike" system after participating in the NRN program. As one NRN participant said, "I like having the green bikes in the community, as the community changes, more people will use them. Right now because of the draw back of the credit card, a lot of people have not used them."

Interviews with NRN liaisons confirmed that a number of participants to reconsidered their thoughts on biking and the types of trips they can take by bike after completing the program. Participants found a great deal of personal freedom getting around by bicycle. As one participant noted,

> [bicycling] It became a lifestyle. I used it all the time to run errands, I used it to go to work, to go to the bank and the post office. I just used it, I started using it you know, in terms of a lifestyle. (Martin and Haynes 2014)

> *"The orange bikes serve different purpose [than the green bikes]. [Participants] had the freedom to use for whatever they wanted."*
> *– Twin Cities interviewee*

> *[Regarding the NRN program] "I could take trips I want."*
> *– Twin Cities interviewee*

When provided an overview (with photos) of the NRN program, Milwaukee interviewees responded positively, and most immediately began to think of ways and

locations it could be used in their communities (see **Bike sharing as recreation** below).

Several interviewees observed that the NRN bike was much more attractive than the

kiosk-model bikes. When asked whether community members would use it, most thought

people absolutely would; however, many identified concerns and barriers such as storage,

theft, safety, and training. Still, a few participants noted that this model would reach their

communities better and perhaps stir an interest in bike sharing.

When synthesized with the NRN study's recommendation that program

participants be viewed as invaluable bike advocates, it appears that programs such as

these stand to be a valuable entry point to bikeshare. The authors recommended the

following:

> [These newfound advocates] should be given the resources to help friends use
> bikes from a bike library, the green bike share program, other bicycle lending
> programs, and bicycle giveaways for children. Nice Ride could be intentional
> about building a community of bicyclists and advocates. (Martin and Haynes
> 2014)

Community connections

As noted throughout this thesis document, building relationships among decision

makers, community partners, and the community are crucial in developing equitable

bikeshare practices. While the NRN evaluation notes that there was some

miscommunication and confusion as to the community liaisons' role, it acknowledged

that the program's success was largely due to the "proactive engagement" and "great deal

of behind the scenes work" from these partners (Martin and Haynes 2014).

The NRN evaluation also draw attention to the importance of community building

among participants. The visibility of the orange bikes caused participants to feel

connected to one another. Many also noted that the supportive nature of the group rides

added to this sense of creating a biking community. (Martin and Haynes 2014) Some feedback from interviews for this thesis indicated that some of these relationships, particularly in North Minneapolis, may have existed prior to the NRN program; however, the comradery and connections experienced in the program were no less real.

Furthermore, NRN participants observed that the program gave them a different perspective of their neighborhoods. Participants began to appreciate their neighbors and the physical neighborhood in a new light, and wanted to share this perspective through biking. (Martin and Haynes 2014)

> *[The goal is] to build a community that bikes; and it needs to be socially equitable"*
> *– Twin Cities interviewee*

[NRN gave me the] "Opportunity to see [the] good side of North, gives you a chance to have the community come together." – NRN Participant (Martin and Haynes 2014)

"I like how we had to show up at events, it gave us something to do, a task, not just handing us the bicycles…. Bicycling as a crew, every time we bicycle if felt like a parade, people staring and honking like they wanted bicycles." – NRN Participant (Martin and Haynes 2014)

Milwaukee interviewees did not specifically identify how a model like the NRN program would help in connecting their community members; however, many imagined how their organizations would use it as a tool to engage specific groups within their communities. Most considered its use in one of their youth programs or health initiatives. When compared to the kiosk bikeshare model, Milwaukee interviewees noted that the NRN program seemed more conducive to how their community views biking and that it might be better received by community members.

Including women, youth, and families

The NRN evaluation did not specifically suggest tailored outreach to women in underserved communities; however, many NRN participants that were interviewed as part of this thesis research stressed that an emphasis must be placed on engaging women specifically. Several interviewees noted that women of color could be considered *the* most disenfranchised group in the discussion—if not the country. In addition to pursuing a bikeshare system that is equitable for those in low-income communities and minority communities, systems must also provide equitable access for women and men. One interviewee added that equitably engaging women could be profitable for bikeshare operators by accessing its "biggest market."

> [About NRN] *"All but one participant [in my group] were women. We didn't really target our efforts on women, but I think women just respond to things like this more than men."*
> *– Twin Cities interviewee*
>
> *"Especially for Latina women, immigrants, there's this huge feeling of isolation because 'this is not our country.' The levels of depression are very high. Their husbands aren't a home; they are working. Things change. Their families change. Their friends change. There are these different levels of depression. We found that putting women together in walking groups helped a lot. It makes for a great community connection." – Milwaukee interviewee*
>
> *"We see a lot more of African American males biking as transportation. Biking as a form of transportation for African American females is nil. […] We're starting to see a lot more women biking for recreation. […] Biggest untapped market in biking: African American females. Groups like Black Girls Do Bike make a difference. People are looking for groups for them. 'I can meet people. Ride with other people. If something goes wrong with my bike, there's other people around me. There's someone else out there who wants to ride with me.' "*
> *– Milwaukee interviewee*

"Even when having the conversation about equity, women have to be at the table. Women need to be looked at as an underserved population specifically as it related to biking. […] When you think of the world of nonprofits and social work, that's dominated by women. They have perspective in place that, if asked, they'll share."
– Twin Cities interviewee

Recent studies indicate that women "constitute a higher share of casual [bikeshare] users" and that women are particularly likely to use [bikeshare] to cycle in London's large parks, given that acquiring skills as a leisure cyclist may be an important first step in taking up cycling for transport[ation] (Goodman and Cheshire 2014; Beecham and Wood 2013; Nettleton and Green 2014).

In an evaluation of the Citi Bike program for New York City Housing Authority (NYCHA) residents, Stead (2015) observed that more than two-thirds of housing authority adult residents are women. He also eluded to other studies that indicate that women and men "tend to demonstrate different types of travel behavior, with women showing more concern for safety when making mode choices, but also being more likely to make several stops during a trip […]" Stead observed that female respondents to his survey "reacted positively" to the prospect of women-only cycling classes and group rides to "relieve some of the intimidation that often acts as a barrier to new or would-be cyclists."

Furthermore, Stead (2015) suggested bikeshare advertising should include African American and Hispanic/Latina women using the system to counteract the perception that bikeshare is "not intended for them." While not specific to gender *per se*, Hoe and Kaloustian (2014) similarly observed that focus group participants "wanted to see diversity in the advertisements in terms of race, gender, and specifically '[people that looked like them.'"

Another important finding from the NRN program that often arose in interviews with community partners was that many in underserved communities desire bike programs that include opportunities that include youth and families. The NRN evaluation noted that several participants suggested providing bicycles for children and including them on group rides. Furthermore, many suggested that the ability to include their families "encouraged them to ride more frequently and that the program provided them an opportunity to spend more quality time with their families. (Martin and Haynes 2014)

> *"Accessibility for people with children came up a lot [in the NRN program]. A lot of people wish they would've had some bikes for their children. […] We had trouble trying to connect [a trailer]. We were told that's a liability and we can't do that, so that was a real turn off for some the families that really wanted to try it out. 'Because I have a 3-year-old, so this bike's not going to work.'"*
> *– Twin Cities interviewee*

As noted earlier, other recent literature indicates that providing opportunities to ride as a group or family may be more important to underserved communities that previously assumed. Female African American focus group participants in Philadelphia noted that they spend a considerable amount of time transporting kids to school and other activities which would prevent them from using bikeshare. Many participants noted that they would be more likely to use bikeshare if their kids could be accommodated as well. (Hoe and Kaloustian 2014)

While largely unexplored in bikeshare systems in the U.S., Stead (2015) observed:

In summer 2014, Velib bike share program in Paris launched a service for children ages two to ten comprised of 300 bikes in four different sizes. The bikes all include helmets and many have training wheel for children who have just begun to learn how to ride.

Health benefits

The NRN evaluation observed that most participants realized the health benefits of biking before the program; however, many reported that their physical and mental health improved as a result of participating in the program. "This included: weight loss, improved mental health, lower cholesterol, increased physical stamina, just to name a few." Participants offered that improving personal health was not necessarily the primary motivator for joining the program; however, it "emerged as they participated." (Martin and Haynes 2014)

Many of the interviewees in Milwaukee saw the NRN as being beneficial to their communities as a means to increase physical activity and improve the health of community members. Some compared it to walking clubs, exercise classes, or other fitness groups already existing in their community.

> *"There should be a stronger health aspect and it should be structured around community events.*
> *– Milwaukee interviewee*
>
> *"I imagine it like clubs. Like walkers in Washington Park or Zumba classes at churches or the programs at Boys & Girls Clubs."*
> *– Milwaukee interviewee*

As noted earlier, while biking to realize certain health benefits may not always be an effective motivator for members of underserved communities, the feedback in both of these studies indicates that these perceptions may change once community members begin to participate in activities with a health component.

NRN Conclusion

In sum, the NRN program, changed perception and individual behavior of bicycling as transportation and it helped to remove barriers to bikeshare that otherwise prevented its use. The program also raised participants' awareness of the health benefits of biking. Furthermore, the evaluation report highlighted the importance of community and neighborhood connections, and it stressed the role of women and families in creating communities that bike. (Martin and Haynes 2014) Upon hearing about some of the details of the NRN program, a few interviewees in Milwaukee wondered if bikeshare would be better used for recreation in their communities.

3.3.2 *Bike sharing as recreation*

"The providers don't always see themselves as users. It's in their mind that it it's about recreation when we talk about bike sharing. Even when we talk about bike riding; it's recreation. It's not really considered transportation for a lot of them. […] We need to convince them to become users. Thinking about it as the first and last mile [to transit]. If you need to go a short distance, why not walking, or biking or bike sharing to help you cover that last mile? That's where getting on a bike during a workshop helps them think about 'this is one block and I don't feel too sweaty or too taxed. I feel like I can do this.' We purchase bikes and not bikeshare memberships because that people told us they want."
– Twin Cities interviewee

Possibly the most radical theme to emerge, more noticeably during interviews in Milwaukee, was an interest in bike sharing as a primarily recreational activity instead of as a means to commute or run errands. This sharply contrasts with current assumptions about how bikeshare systems should be used. A palpable excitement arose during interviews when participants imagined how—and where—members from their community could use bikeshare. Few discussed it in terms of utility, but instead many imagined ways to connect and experience their communities in a different way—and as a group. Several Milwaukee interviewees suggested that they could envision a few

bikeshare stations located in or around parks with wayfinding signs or maps available to explore features of the parks and surrounding neighborhood amenities. One participant described it as *"being a tourist in your own neighborhood."*

> *"I don't see it being successful on a main street; I see it successful at a park. Maybe 5 or 10 years ago, you didn't see many African Americans down there [at Lake Michigan]. You go down there on a Saturday or Sunday now, you see a lot of groups. You see a lot of ladies, 20-30 ladies. You see men groups. You see families. So something is changing. That Lake is for everybody. You can have a successful biking program if you put it there. We can pull people from the community to get there. And put it at Lincoln Park or McGovern Park. You just need to have people that believe in it."*
> *– Milwaukee interviewee*
>
> *"There are people that have never been to the Lake [Michigan], and it's just over there!"*
> *– Milwaukee interviewee*

Recent studies suggests that this sentiment may not be unique to Milwaukeeans. Upward of 65% of Citi Bike's NYCHA program used bike sharing for recreation (fun or exercise) with only 7% using it for running errands, 7% for commuting to work, and 11% other (Stead 2015). As noted by Stead (2015):

> […] it fascinating goes against the findings of previous studies, which show bicycle usage amongst low-income populations to be utility driven as opposed to recreational (Pucher, et al; 2011)

Feedback from focus groups in Philadelphia may also support this observations, as summarized by Hoe and Kaloustian (2014):

> The focus group revealed that while many low-income people think about biking as a form of recreation, they do not use, or even think about, biking as a means of transportation. In order for bike share to be successful in these communities, there will need to be a fundamental shift in attitudes surrounding bikes in general, biking as an activity, and commuting on bikes.

Researchers in the U.K. suggested that biking recreationally (e.g., in parks and the local neighborhood) may provide "an environment for acquiring [bicycling] skills [… where] potential risk [can] be managed" (Nettleton and Green 2014). In effect, biking for recreation in parks and neighborhoods is a proving ground where residents can practice and develop their biking skills and eventually become comfortable (and interested) in biking for transportation. Once people get used to biking and using bike sharing, the system can be expanded to serve more utilitarian activities.

4   Recommendations

This chapter includes recommendations for bikeshare planners, operators, advocates, and partners. The recommendations are focused around the four key themes that emerged from discussions with community partners in Milwaukee and the Twin Cities. As the importance of meaningful relationships was stressed in virtually every community partner interview, the recommendations include specific actions that each player could take to contribute toward building those relationships.

4.1   Focus on relationship building

Engage the community early in the planning process

Underserved communities must be engaged early in the process of planning bikeshare systems. Trust, or distrust, starts on Day One. If decisions are made prior to initiating dialogue with the communities, partners noted that perceptions of distrust and gentrification will have already been established.

Table 4.1: Engage the community early in the planning process

Bikeshare Operators & Planners	Develop a communications plan that includes how and when interactions with underserved community members or their representatives will occur. Foster relationships with key community partners and stakeholders prior to developing detailed designs or station locations. Maintain a presence at community events with an emphasis on building relationships, not disseminating material.
Bicycle Advocates	Provide guidance, events, and avenues for bikeshare operators and planners to effectively introduce themselves to underserved communities. Lead bicycling events and rides with a bikeshare component (e.g., bringing bikeshare bikes to a local park for community members to try). Assist operators and planners in developing a toolbox of lessons learned and best practices from around the world for engaging underserved communities early in the process.
Community Partners	Introduce bikeshare operators and planners to underserved communities by including in or inviting to community events and programs. Assist in building trust by facilitating discussion, participation, and interpretation as necessary.

Include community members in decision making

In addition to coordinating with underserved communities early in the process, community partners and members must be included in the decision making process in a meaningful way. Community partners suggested that residents would be invaluable in identifying key locations in which to place bikeshare stations. Feedback from members of the community would also be crucial toward effectively identifying and mitigating barriers to bike sharing. Interviewed community partners suggested that community members would provide creative solutions that may be overlooked or dismissed by someone without an intimate understanding of the community's needs.

Table 4.2: Include community members in decision making

Bikeshare Operators & Planners	Provide opportunities for community partners and community members to participate in the decision making process. Activities could include: focus groups, group rides, facilitated meetings, charrettes, canvassing, social media, and other creative outreach tools. Capitalize on and participate in other community events (e.g., holiday events, church events, block parties, etc.) Explore social marketing techniques (e.g., "Tupperware" parties). Ensure that the focus is on relationship building and meaningful engagement.
Bicycle Advocates	Include considerations for equitable bikeshare in various bike-related advocacy such as education, lobbying, and planning. Assist in connecting bikeshare operators and planners with peers in other fields and locations. Invite bikeshare operators and planners to participate in other community events; help introduce them to community members.
Community Partners	Help bikeshare operators and planners plan events and programs focused on engaging underserved communities. Assist with facilitating discussion, participation, and interpretation as necessary.

Have the hard conversations

In many underserved communities, access to biking and bike sharing is the least of some residents' concerns. Many communities have been plagued with decades of neglect which in many cases has resulted in racial tensions, poverty, unemployment, and

widespread inequity. In order to engage communities on a meaningful level, planners and decision makers need to understand the underlying context and challenges facing underserved communities. Bike sharing will not likely have a wide-reaching impact in alleviating these challenges; however, providing a platform for community members to participate in the decision making process may build trust and help to develop creative solutions. Furthermore, community members may help in redefining how biking and bike sharing fit into the overall transportation needs of underserved communities.

Table 4.3: Have the hard conversations

Bikeshare Operators & Planners	Set a tone at meetings, events, and in the marketing approach that is inclusive of all feedback. Be mindful to listen. Intentionally, provide opportunities for community members to voice their perceptions and opinions on bikeshare and to articulate the challenges facing their community. Be cognizant and respectful of greater inequity experienced by members of underserved communities.
Bicycle Advocates	Establish a stronger sense of what equity means to the greater community of bicycle advocates and what equitable bikeshare looks like. Partner with academia to develop a comprehensive library of literature related to bike equity. Challenge bikeshare operators and planners to follow lessons learned and best practices toward achieving equitable systems.
Community Partners	Help facilitate a neutral environment conducive to having these hard conversations. Assist with facilitating discussion, participation, and interpretation as necessary. As the nexus between these two worlds, community partners may be the key to defining how equity translates between community members and bikeshare operators.

4.2 Establish bike sharing as recreational activity

Reconsider the entry point of bikeshare

Some underserved communities and neighborhoods may simply not be ready for bikeshare for a variety of reasons. Safety is primary concern for many residents. Some do not consider the cost (in money or time) reasonable. Others have not used a bike in years. In many underserved communities, biking is simply not socially acceptable. Whatever

the case may be, additional effort and encouragement may be necessary to making bike sharing more viable, comfortable, and acceptable.

Bikeshare planners and decision makers should consider other programs or activities as an entry point to biking and bike sharing. Many interviewed community partners—and recent research— have indicated that people in underserved communities may be more interested in using bikeshare for recreational purposes instead of "as transportation." As people become more comfortable with biking in safer scenarios and/or become more familiar with bikeshare, community partners believe that bikeshare use for other, more utilitarian purposes would increase.

Table 4.4: Reconsider entry point of bikeshare

Bikeshare Operators & Planners	Identify and document the various markets the bikeshare system intends to serve and how marketing will be handled for each group. It is recommended that if public funding is used for any part of the system, that the plan include an equity component. This component should include programming and budgets for introducing underserved community members to bikeshare. Coordinate with community partners' programs and events to the greatest extent possible.
Bicycle Advocates	Invite bikeshare operators and planners to participate in other bicycle advocacy programs and efforts. Partner with academia to develop a comprehensive library of literature related to how other bicycle advocacy programs and efforts may affect bikeshare use. Challenge bikeshare operators and planners to pilot alternative entry-point activities into biking and bike sharing.
Community Partners	Partner with bikeshare operators and planners, and assist with developing unique and creative alternative entry points into biking and bike sharing. Help bikeshare operators and planners plan events and programs focused on engaging underserved communities. Assist with facilitating discussion, participation, and interpretation as necessary.

Place stations in parks, near housing, and near transit transfers

In tandem with promoting bikeshare as a recreational activity, bikeshare planners and decision makers should strategically partner with and place stations near parks, public housing, and transit. While it is important to include community members in identifying the best locations for bikeshare in their neighborhoods, feedback from community partner interviews indicated that parks, public housing units, and transit transfer points are key locations for underserved community members. If bikeshare stations were located at these important interfaces to the community, residents will find a use for it as a resource. However, stations cannot simply be placed at these locations without some sort of training or orientation. Bikeshare planners and operators should seek partnerships with the stewards of these parks, public housing locations, and transit stops.

Table 4.5: Place stations in parks, near housing, and near transit transfers

Bikeshare Operators & Planners	Work with community partners, businesses, and community members to identify key locations for underserved communities to best experience bike sharing.
Bicycle Advocates	Partner with academia to develop a comprehensive library of literature related to how and where the transportation and biking needs of underserved communities can be best met. Challenge bikeshare operators and planners to follow lessons learned and best practices toward placing stations where they are needed most.
Community Partners	Partner with bikeshare operators and planners, and assist in identifying key locations for underserved communities to best experience bike sharing. Assist with facilitating discussion, participation, and interpretation as necessary.

4.3 Use community partner long-term bicycle loan programs as an entry point to bikeshare

Long-term bicycle loan programs appear to be an effective alternative entry point to bike sharing. Among many benefits, programs such as the Cycles for Change Community Partner Bike Library and the Nide Ride Neighborhood program changed the perception of biking; utilize valuable relationships between community partners and the community; include orientation and training; incentivize the biking experience in a monetized way; and most importantly, build a community that bikes. In many ways, these programs address barriers to bikeshare by empowering participants to take ownership of the bicycle both figuratively and literally. Testimonials of such experiences indicate that programs such as these have the ability to transform individual's perceptions of biking. In some case, they appear to have led individuals to realize transportation options they never thought they had, including bike sharing.

Table 4.6: Use community partner long-term bicycle loan programs

Bikeshare Operators & Planners	As a possible alternative entry point into bike sharing, develop a community partner long-term bicycle loan program. Program should include budget and staff to effectively introduce underserved community members to biking with a long-term goal of creating potential future bikeshare members. Coordinate with community partners' programs and events to the greatest extent possible.
Bicycle Advocates	Partner with academia to research whether long-term loan programs are an effective entry point into bikeshare. Provide guidance on how to effectively engage, educate, and train participants of such programs. Help bikeshare operators and community partners identify funding sources for such programs. Challenge bikeshare operators and planners to follow lessons learned and best practices toward using long-term loan programs.
Community Partners	Partner with bikeshare operators and planners, and assist with developing long-term loan program. Help bikeshare operators and planners plan events and activities focused on engaging underserved communities. Assist with facilitating discussion, participation, and interpretation as necessary.

4.4 Provide more opportunities for women, families, and groups

Bikeshare planners and decision makers need to better accommodate women, families, and groups. Feedback from community partner interviews and recent studies overwhelmingly indicates that underserved communities desire more opportunities to ride as families or groups. Doing so would reduce some barriers including the complexity of trips for individuals responsible for children; personal safety and comfort; and "sticking out in a bad way."

Furthermore, research indicates that women in underserved communities may be particularly disenfranchised by bikeshare for a number of reasons including, but not limited to, risk of harassment or assault; inequitable societal beauty standards; and the complexity of family responsibilities.

Opportunities to include families, women and community groups could be accommodated by programs or group rides sponsored and organized by bikeshare operators. These events should be mindful of accommodating all levels of ability.

Table 4.7: Provide more opportunities for women, families, and groups

Bikeshare Operators & Planners	Develop a plan that includes how women, families, and groups in underserved communities will be accommodated. Seek programming and equipment to accommodate these users. Foster relationships with key community partners and stakeholders focused on reaching these groups.
Bicycle Advocates	Establish a stronger sense of the degree to which women, families, and other marginalized groups may be disproportionally unserved by biking outreach and bikeshare. Partner with academia to develop a comprehensive library of literature related to this equity. Challenge bikeshare operators and planners to follow lessons learned and best practices toward accommodating these groups.
Community Partners	Partner with bikeshare operators and planners, and assist with developing programming to better accommodate women, families, and groups. Help bikeshare operators and planners plan events and activities focused on engaging these groups. Assist with facilitating discussion, participation, and interpretation as necessary.

5   Further Study

5.1   Study Limitations

The approach and findings of this thesis are subject to certain limitations, and they warrant further study. First, the research approach was qualitative in nature, so it was not possible to quantify how closely the feedback from community partners represented opinions throughout the low-income and minority communities that they served. The data were narratives, stories, and anecdotes intended to paint a picture of the perceptions of biking and bike sharing in underserved communities. While the evaluation could have involved quantitative analyses to gauge various measures of inequity in these communities, including the distribution of transportation, biking, and bikeshare resources, in-depth interviews provide a rich understanding of how bike sharing is currently perceived.

The findings are also limited by the small sample size and method. A total of 26 community partners were interviewed, 12 in the Twin Cities and 14 in Milwaukee. This represents roughly 30 percent of the "population" of possible community partners identified in **Appendix B**. There are many other organizations that represent underserved communities in both cities.

Additionally, the original list was provided by Nice Ride based on current or former program partners. While additions were made to the list based on the suggestions of participants and other advocates, it is possible that many of the interviewees in the Twin Cities may have had previously conceived perceptions of biking and bike sharing. The Milwaukee list may have included less bias since few, if any participants, had an

existing relationship with Bublr Bikes; however, it may still have been biased to the types of organizations that partnered with Nice Ride.

The interview participants were members of organizations that worked with community members; thus, many were representatives of their community rather than the community members themselves. This representative approach could introduce bias due to the nature of their relationship with underserved communities and backgrounds in social justice, many participants were likely "hyperaware" of various injustices and inequity present in the communities they serve. As such, their feedback is likely energized with words and stories intended to incite passion and action, among other emotions. In some cases, the interviews could have been subject to "code-switching" in which "for social reasons, a speaker alternates between two different language varieties within a single conversation. Code switching is motivated by a desire to appeal to different race, gender and glass groups, often from the person's own background." (Hoe and Kaloustian 2014)

When attempting to gauge the perceptions of a community, it is likely most effective to survey members of the community. The research approach originally included holding focus groups of community members; however, time and resources became insufficient. Many participants spoke as members of the communities they serve, others as representatives of the community or their organizations. A emphasized that they were not speaking on behalf of their organizations and are anonymously quoted as appropriate.

While the feedback from community members has greater potential to be more subdued, it is important to remember that many community partners interviewed stand at

an important crossroads in the conversation of equity and social justice. They understand the needs of their communities at large, they understand the policy framework and resources in play, and they understand the vernacular used by policy makers and planners. In many senses, they are the exactly the right people to ask about perceptions of systems affecting communities.

5.2   Other Topics

This entire report could be considered a suggested premise for further research. Two areas stand out as needing substantially more data and effort. The first suggestion is expand the scope and resources to include focus groups with community members (via a scientific sampling method). As mentioned above, to really understand the perceptions of communities at large, researchers need to engage community members just as much as bikeshare operators and planners.

Secondly, the research should be expanded to include other metro areas. While Milwaukee and the Twin Cities provided many insights, it is difficult to know whether similar findings would be expected elsewhere. Examples from New York City and Philadelphia were injected into the discussion where appropriate, but this information was not gathered as part of the same research approach.

While many of the specific findings and recommendations discussed in this report warrant further study, a number of other topics worthy of more attention arose during interviews with various community partners and bicycle advocates. Some of the most notable include:

Table 5.1: Topics for future study

Assessing the effectiveness of removing barriers
Further analysis or inventory barriers particularly language/translations, reading levels, and cultural barriers
Exploring the concept of critical mass (essentially, what is the tipping point for biking or bike sharing to become socially acceptable?)
More research on the potential of subsidization of bikeshare and the corresponding environmental justice framework
More investigation on the perceptions of biking as transportation
Expanded analysis or inventory of other models of bike share
A statistical analysis of the relationship between socioeconomic factors and race/ethnic factors and how they affect biking and bikeshare use
More research on the perceptions of transportation choices in underserved communities

6 Conclusion

The findings and recommendations of this study indicate that there is still a great deal of work and research needed to understand how underserved communities truly perceive bike sharing—or even biking for that matter. However, representatives of people living in underserved communities can attest to the importance of building meaningful relationships with communities. Doing so builds trust and empowers communities to participate in activities such as biking and bike sharing.

The study also indicates that other entry points to biking and bike sharing such as long-term bicycle loans and biking as recreation (e.g., initial station installations in parks) may more effectively make biking more acceptable (socially and logistically) to community members who wish to realize its benefits. In the long term, investing in these types of programs may prove more effective in building a bikeshare customer base in underserved communities.

Finally, efforts to provide equitable access to bike sharing need to include targeted activities for women, families, and groups. Equity cannot be defined solely as access for low-income or racial/ethnic minority populations. Evidence suggests that women and families are particularly disenfranchised and excluded from biking and bike sharing opportunities. By making intentional accommodations to include women and families, bicycle advocates and bikeshare operators may realize increased participation from all members of the community.

While many bikeshare operators and planners are employing efforts to provide more equitable access to underserved communities, it appears that we may have

neglected to ask what equity means or what it should look like. I often reflect on an

analogy I read on a blog some time back (David 2008). It goes something like this:

Table 6.1: Equity versus equality

There's this activity I do in my class. All the students sit in a circle, and I ask everyone to take off his or her left shoe and throw it into a pile in the center. Once the shoes are all piled up, I begin re-distributing them, one to each student, completely at random. Then I tell everyone to put on the new shoes. And inevitably, there begin the complaints.

"This isn't my shoe!"

"It's too big!"

"It's too small!"

"This doesn't fit me!"

Whatever the specific complaints are, very few students are actually happy with their newly mismatched pair of shoes. "What's wrong?" I ask. "I did everything fairly. You all have two shoes - one for your right foot and one for your left."

"But Miss David," they say, "they aren't the correct shoes!"

"Oh," I say. "You want the shoes that are best for each of you individually? Not just any shoe I find?"

"Yes!" they all say.

"But," I say, with furrowed brow, "that doesn't seem fair. I wanted to treat you all EQUALLY." I point to a boy with somewhat large feet, and a nearby girl with smallish feet. "He'll have more shoe than you will," I note. And without a doubt, someone unknowingly gets right to the heart of the issue:

"It doesn't matter who has more shoe, Miss David. It matters that we all have the right shoes for us."

And THAT, my friends, is the difference between equity and equality. Equality means everyone gets exactly the same outcome - two shoes - without regard to individual differences - large or small feet, for example. Equity means everyone gets the same quality of outcome - shoes that fit their individual needs.

In parting, many readers are decision makers or planning practitioners on some level. As such, we are morally obligated to follow a Code of Ethics that guides how we approach our work. The American Institute of Certified Planners' Code reminds us that:

> We shall seek social justice by working to expand choice and opportunity for all persons, recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration. We shall urge the alteration of policies, institutions, and decisions that oppose such needs. (American Planning Institute 2009)

Bikeshare is no exception. It is not for anyone; it is for everyone. It is our obligation to make sure that all people have equitable access to all modes of transportation, especially if any public funding is used. However, we need to ask what equity means to communities with specific—often unmet—needs. It some cases it may be different than we assumed, and that is okay. It is our obligation and challenge to address the needs of different communities equitably.

As a more substantial library around the topic of bike and bikeshare equity emerges, advocates, planners, and bikeshare operators will need to "step up" and ensure that equitable practices are being explored and implemented to the greatest extent possible—particularly in the way underserved communities are included and engaged and their needs are met.

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buenos-aires-bike-lending-program/

Appendix A: Commonly Used Terms

Terms	Author's Rationale
Academia	General field of researchers in colleges, universities, think tanks, advocacy groups, etc.
Bicycle advocates	Typically, nonprofit organizations focused on promoting bicycling through education, legislation, or other outreach programs.
Bicycling, biking, or cycling	All refer to the activity of riding a bike
Bike sharing, bikeshare, bikeshare system	System in which bicycles are shared among users, often for a fee (see 1.5 Bike Sharing Background). Bike sharing was typically used as a verb; bikeshare as a noun or adjective; bikeshare system as a noun
Bikeshare operators, planners, decision makers	Organizations implementing and running bikeshare systems. Operators generally refer to those focused on the day-to-day business of running the system. Planners are those involved in evaluating the system, placing station locations, and developing the programming. Decision makers refers to any person or organization involved with planning and/or operating the system. In some cases all three roles may be one organization or person; in others they may even be outside partners.
Community partners, intermediaries, liaisons	All refer to willing and interested "third party brokers who help bridge the barriers that keep low-income communities from accessing shared mobility […]" (Kodransky and Lewenstein 2014). Organizations include, but are not limited to: Social service providers, housing authorities, bicycle advocates, transit advocates, institutions of higher education, and other nonprofit organizations.
Nonprofit organizations	Generally, organizations and agencies organized as tax exempt under category 501(c)(3).
Social service providers	Generally, organizations and agencies that offer services to underserved

Terms	Author's Rationale
	communities. Services often include childcare, education, employment training, health care, hunger prevention and assistance, public housing, etc.
Underserved communities, underrepresented, low-income populations, minority populations, community members	While not necessarily synonymous, the term underserved community is most commonly used in this document. Generally, it is used to include low-income populations, minority populations, women, and other historically disenfranchised groups. In a few cases underrepresented is also used. Community members generally refers to members of these groups, but it is used in terms of potential participants in the decision making process or users of a program.

Appendix B: Community Partner Organizations

Minneapolis/St. Paul List

Organization Name (Twin Cities)
American Indian OIC
Augsburg Residence Life
Augsburg TRiO
Aurora/St. Anthony NDC
College Possible
Community Action- Minneapolis
Cycles for Change
Emerge
Hamline University, Department of Student Affairs
Heritage Park Teen Group
Hmong American Partnership
Indian Health Board
Little Earth
Major Taylor Bicycling Club
MCE Adult Education Center
MCTC Resource Center
MCTC Trio
Metro State TRiO
Minneapolis Urban League
Model Cities
Native American Community Clinic
Native American Community Development Institute (NACDI)
Neighborhood House Education Programs
NorthPoint Health and Wellness
Project for Pride in Living
Redeemer Center for Life
Saint Paul College
Skyline Tower
SPOKES
St. Cate's Access & Success
St. Paul - Ramsey County Health
St. Paul Public Housing
St. Paul Public Schools AVID
St. Thomas Excel Scholars
Summit Academy OIC
Summit Academy OIC
Torre de San Miguel

Organization Name (Twin Cities)
Transit For Livable Communities
Transition Plus
U of M Snap Ed Program
U of M TRiO
Venture North
Vietnamese Social Services
Wallin Education Partners

Milwaukee List

Organization Name (Milwaukee)
Alverno College
American Civil Liberties Union
Cardinal Stritch University
Clarke Square Neighborhood, Inc.
Common Ground
Dreambikes
Gerald L. Ignace Indian Health Center, Inc.
Historic King Drive Business Improvement District
Hmong American Friendship Association, Inc.
Housing Authority of the City of Milwaukee
IndependenceFirst
Layton Boulevard West Neighbors
Marquette University
Menomonee Valley Partners
Merrill Park (MMSD)
MetroGO
Milwaukee Area Health Education Center
Milwaukee Area Technical College, Department of Multicultural Student Services
Milwaukee Area Workforce Investment Board
Milwaukee County Labor Council, AFL-CIO
Milwaukee County Parks
Milwaukee County Transit
Milwaukee Rescue Mission
Mount Mary University
Northcott Neighborhood House
Northwest Side Community Development Corporation
PAVE
Silver Spring Neighborhood Center
Sixteenth Street Community Health Center

Organization Name (Milwaukee)
Social Development Commission
Spotted Eagle, Inc. Native American Programs
The 30th Street Industrial Corridor
The Milwaukee Urban League
UMOS
United Community Center
United Neighborhood Centers of Milwaukee
University of Wisconsin-Milwaukee, Office of Equity / Diversity Services
University of Wisconsin-Milwaukee, Parking & Transit
UW-Milwaukee, Institute for Urban Health Partnerships
Walnut Way Conservation Corporation
Wisconsin Bike Fed
WRTP/BIG STEP

Appendix C: Sample Interview Questions

The Community

Q1.   How would you describe the community that you serve?

The purpose of this question was to keep the focus of the overall research and also that of the interviewee's response on the community. The intent of the study was to see biking and bike sharing through the eyes of the community and its representatives. So often in transportation planning history, the story becomes that of the planners and not those affected by the plan. Beginning each conversation with a description of the community provided the interviewee with an opportunity to describe his or her relationship with the community and frame the subsequent responses in the context of that relationship.

Transportation in the Community

Q2.   How well do you feel the transportation needs of your community are met?

This question aimed to prompt the interviewee to consider the greater transportation needs of the community in the context of how community members actually get around. Interviewees were invited to describe what modes of transportation community members frequently use, what stories they hear from the community, and what obstacles prevent people's transportation needs from being met.

Q3.   Do you feel that people in your community have choices when it comes to transportation?

This question invited interviewees to consider how they perceive people in the community view various modes of transportation and whether they have a sense of the choices members of the community may or may not make.

Q4.   Do people think that they have transportation choices?

The purpose of this question was to provide the interviewee with a moment of pause to consider the objectivity of their previous answer. It was not intended as a trick, but rather to consider whether members of underserved communities actively chose transportation. The concept of choice in communities where transportation options are limited frequently arose during conversations. Often the dialogue indicated presence of greater inequity in transportation planning beyond that of biking and bike sharing.

Q5.   <u>What do you think is the preferred mode of transportation in your community?</u>

The purpose of this question was twofold. First, it was intended to identify whether community members gravitated toward any particular modes of transportation and for what reason(s). Second, it was intended to gauge the degree to which the automobile is or is not a symbol of status in underserved communities.

Bicycling in the Community

Q6.   <u>How are people that bicycle viewed in your community?</u>

This question was intentionally placed after Question 5 to determine whether bicycling had comparative or contrasting symbolism to that of the automobile, depending on the answer to Question 5. It also served as an opportunity for the interviewee to consider how frequently he or she encounters bicycling in their community and whether the topic comes up in conversations related to their role in the community.

Relationship with Bike Organizations

Q7.   <u>What is your relationship (if any) with local bike organizations?</u>

This question prompted the interviewee to consider their current or potential relationships with bicycle organizations in the greater metropolitan area. In some cases the interviewee was selected because of an existing relationship with a bicycle organization. Others did not have any relationship with such organizations; however, the

question (and overall interview) prompted them to consider whether they were interested in having one.

Bike Sharing in the Community

Q8. <u>What is your familiarity with bike sharing?</u>

If the interviewee was familiar with bike sharing, this provided an opportunity for the interviewee to describe what he or she knew about bike sharing in their community and offer any personal opinions or opinions he or she heard from their community. If the interviewee was not familiar with bike sharing, this provided the interviewer with an opportunity to describe various bikeshare models (including pricing common structures) and show photos of the common components of the system.

Q9. <u>Who do you think bike sharing is for?</u>

The intent of this question was to gauge whether the interviewee had any opinions on whether bike sharing appeared to be marketed or modeled for any specific demographics or bicyclists. It also called into question generally how equitable the local bikeshare operator appeared to be from the interviewee's perspective.

Q10. <u>How is bike sharing viewed by your customers or constituents?</u>

This question invited the interviewee to consider opinions or stories that he or she may have heard about bike sharing from community members.

Barriers to Bike Sharing

Q11. <u>What barriers do you see preventing people from using bike sharing in your community?</u>

For interviewees that were familiar with bike sharing, this question provided an opportunity to discuss the barriers to biking or bike sharing that interviewee and/or community members have encountered. For those not familiar with bike sharing, this

provided an opportunity for the interviewer to describe barriers that have been documented and for the interviewees to consider other barriers that are not commonly discussed.

Future of Bike Sharing

Q12.   <u>What do you see your role as being going forward?</u>

The purpose of this question was to determine whether the interviewee viewed themselves or their organization as a partner with bicycle or bikeshare organizations. It also prompted the interviewee to consider whether he or she or the organization would continue or pursue an active role in promoting biking of bike sharing.

Q13.   <u>What would you like to see out of bicycling advocates and bikeshare operators going forward? Is there anything you think is not being adequately addressed in the conversation?</u>

This question gave the interviewee an open opportunity to identify any specific areas of bicycle (or transportation) advocacy and planning that is frequently overlooked by decision makers. It aimed to identify "blind spots" in the assumptions being made and areas for growth in the way planners and decision makers approach the equity in bicycling and transportation.

Q14.   <u>Is there anyone else I should talk with?</u>

Reiterating that the main focus of the thesis is the community, the purpose of this question was to identify other key (or potential key) voices of the community that may or may not have an opinion on bicycling or bike sharing. It also intended to serve as a potential first step in identifying possible relationships for further collaboration between community partners, bicycle advocates, and bikeshare operators.