

Macalester College
DigitalCommons@Macalester College

Geography Honors Projects

Geography Department

5-2014

The Social Implications of Bicycle Infrastructure: What it Means to Bike in America's Best Cycling Cities

Erin Daly

Macalester College, erin.dalyy@gmail.com

Follow this and additional works at: http://digitalcommons.macalester.edu/geography_honors



Part of the [Human Geography Commons](#), and the [Urban Studies and Planning Commons](#)

Recommended Citation

Daly, Erin. 2014. "The Social Implications of Bicycle Infrastructure: What it Means to Bike in America's Best Cycling Cities." Honors thesis, Macalester College.

This Honors Project - Open Access is brought to you for free and open access by the Geography Department at DigitalCommons@Macalester College. It has been accepted for inclusion in Geography Honors Projects by an authorized administrator of DigitalCommons@Macalester College. For more information, please contact scholarpub@macalester.edu.

The Social Implications of Bicycle Infrastructure

What it Means to Bike in America's Best
Cycling Cities

Erin Daly
May 6, 2014

Honors Thesis
Advisor: Dr. Laura Smith
Department of Geography



Macalester College



ABSTRACT

The abundance of bicycle infrastructure appearing alongside controversial urban revitalization efforts in recent years has left many with distinct perceptions about people who ride bicycles and their role in society. The lifestyle associated with the most visible cyclist cohorts has furthered divisive perceptions and often times created resentment, as what was once a humble tool for mobility has become a symbol of an inaccessible cyclist “culture” often associated with gentrification. This paper aims to acknowledge existing research on how the bicycle has attained so many divisive connotations, while looking at methods to improve this reputation and increase accessibility to utilitarian cycling moving forward. Analyses of recent and ongoing projects in Portland, Oregon and Minneapolis, Minnesota will demonstrate how specific urban contexts influence perceptions of bicycle infrastructure and future accessibility. Especially important are the perceptions of communities with a strong minority presence, or populations who are typically underrepresented amongst cycling cohorts. In the future, it is crucial that cities acknowledge resident diversity and history of place and utilize human infrastructure as a tool for development, to ensure that all residents feel invested in results of bicycle planning initiatives.

Table of Contents

Abstract	1
Table of Contents	2
Acknowledgements	4
Introduction	6
CHAPTER 1. Context	9
I. Bicycle Trends in American Cities	9
II. Creative Class and Gentrification Concerns	12
III. Literature Review	17
CHAPTER 2. Methodology	24
I. Bicycle Accessibility.....	24
II. Social Implications	25
III. Limitations	26
CHAPTER 3. Portland	28
I. Bicycle Accessibility.....	28
II. Bicycle Culture.....	31
III. Future Plans for Bicycle Infrastructure	33
IV. Residential Trends: Balancing a Segregated History with Progressive Development	35
V. How the Bicycle Became a Symbol of Gentrification in Northeast Portland: North Williams Avenue.....	40
CHAPTER 4. Minneapolis	47
I. Bicycle Infrastructure	47
II. Bicycle Culture and Impacts of Bikeway Development	50
III. Future Plans for Bicycle Infrastructure	53
IV. North Minneapolis Greenway Development.....	55

CHAPTER 5. Recommendations for Future Bicycle Infrastructure Development	63
I. “There’s a Highway Everywhere.” Acknowledging History of Place and Resident Diversity	65
II. “Community as an Asset.” Human Infrastructure.....	68
III. Programming Solutions: Assigning a New Meaning Through Open Streets.....	72
Conclusion	77
Resources	78

ACKNOWLEDGEMENTS

This project would not have been possible without immense support at a number of levels. First and foremost I would like to thank my academic advisor, Laura Smith, for planting the idea two years ago and opening all the doors it took for me to get here, even when things took a turn for the qualitative. Additionally I would like to thank the Macalester College Geography Department as a whole, for the faculty, staff and students who have shaped an incredibly challenging and rewarding undergraduate experience. Within that group I have to acknowledge my fellow honors students, Zack Avre, Merita Bushi and Anna Nassiff, for their unrelenting #encouragement. I am undoubtedly a better student and optimist for getting to know you all through this process (not to mention my improved tweets). I would also like to thank Dan Trudeau and Christie Manning for their time reviewing my project and serving on my defense committee, as well as for their academic guidance throughout my time at Macalester.

The majority of the research for this project was undertaken with a grant from the Hansen Geography Summer Research Fund (through Macalester College) which allowed me to immerse myself in the Portland bike scene for two months. In that time I was fortunate enough to meet a number of community members and individuals involved in advocacy, planning and research, to whom I owe a substantial amount of gratitude: Aaron Brown, Scott Cohen, Linda Ginenthal, Gerik Kransky, Adonia Lugo and Sherifa Roach. My interviewees in Minneapolis were similarly generous with their time, and provided me with insight far beyond that which I could Google, so thanks to Melody Hoffmann, Malik Holt-Shabazz,

Sarah Stewart and Jason Tanzman. Their work never ceased to impress me, and has inspired me to not let this project stop at a paper.

I am forever indebted to Mary Daly and Ty Melero for introducing me to a world full of bicycles beyond the reaches of rural New York, and being my home-base in Portland for the last eight years. To my Saint Paul family at 42 to the left and the L.C. locker room, thank you for all of the moral support and (occasionally feigned) enthusiasm, this project would not have been completed without your faith in me (or your coffee). Finally, I would be remiss if I did not acknowledge my parents and their tremendous role in this process. They deserve an inordinate amount of credit for their sacrifice, trust, and commitment to getting me where I am today. There are no words for my gratitude, except to say that it's been "decent."

INTRODUCTION

My motivation for this project came from seeing and utilizing bicycle infrastructure in Portland and Minneapolis, and wondering why it was not used by a wider range of residents. With such a broad offering of environmental, economic, and perceived social benefits, why have so many people not adopted (or actively resisted) cycling as a means of transportation? These questions evolved as a result of personal lifestyle choices which exposed me to cycling infrastructure and cyclist communities upon moving to an urban area.

I consider myself to be an empowered, independent, female cyclist, who is relatively competent on urban roadways despite a history of living in rural areas. As a result, the social disparities surrounding cyclist populations were not immediately evident to me when I moved to Saint Paul. It was only when a friend sent me an article on bike lanes and gentrification in the North Williams Avenue project (featured in this paper) that I had an “aha!” moment of realization. In order to pursue the issue of middle/upper-class white (male) dominance in the cycling world a bit further, I decided to undertake a senior honors thesis around the issue. Specifically, I wanted to discover what perceptions of cyclists meant for urban residents who do not see cycling as a relevant activity for their communities, and the impacts of a cyclist-oriented built environment.

To be fair, cycling is not for everyone. My motivations for writing this paper began with my personal belief that cycling can provide an emissions-free, more affordable transportation option that is better for the health of both people and places. While this belief is backed by not only personal experience, but the extensive literature discussed above, it does not necessarily provide a mobility solution for everyone. Admittedly there are cohorts

for whom cycling is not a plausible choice due to age, physical capabilities, geography, or social constraints such as familial commitments. It may not be possible for a parent to cycle with a newborn baby or four children in a tow-behind trailer if daycare facilities are not conveniently located, for example. Bonham and Wilson (2010) address how the cycling tendencies of women change depending on their spatial and social circumstances at various stages of life, exploring the conditions which influence ridership beyond purely will. A commitment to cycling as transportation at many stages of parenthood requires a definite lifestyle choice which does not appeal to all, and it may take an element of sacrifice to balance the demands of a car-free lifestyle. Even looking at a less committed level, simply using a bicycle to run errands, a recent Portland survey showed that 33% of residents have a “no way, no how” attitude towards cycling; a third of the city is unwilling, unable, or uninterested in riding a bicycle (Bower et al. 2009).

With that said, cycling is an option for a large percent of commuters and residents across the age and race spectrum. It is therefore unfortunate that those who are physically able to ride a bike often do not feel welcome in our auto-oriented streetscapes; especially if they are not aggressive, white male cyclists in spandex. With the positive economic, social and environmental effects of cycling, I do believe cities should be working to erase such stigmas, give bikes a place on our roads, and promote bicycles as an accessible mode of transit for everyone. Bicycles provide a mobility solution for those facing economic or political barriers to owning a car. As a means for both active transportation and recreation, bicycles can help our nation combat rising obesity and health problems. They eliminate harmful automobile emissions from one’s daily commute. The benefits are endless. Cities should be working to mitigate the negative influences which complicate this relationship and

make it harder for people to rely on bicycles for transportation, physical and social barriers alike.

This study therefore aims to address the sentiments behind social disparities among mainly white, male bicyclists and minority urban residents who are underrepresented in cycling cohorts. What perceptions are forming barriers to increased ridership and perpetuating disproportionate bicycle use?

The following analyses of recent and ongoing projects in Portland, Oregon and Minneapolis, Minnesota will demonstrate how specific urban contexts influence perceptions of bicycle infrastructure and barriers to accessibility. Especially important are the perceptions of communities with a strong minority presence, or populations who are typically underrepresented amongst cycling cohorts. The recent case of North Williams Avenue in Portland provides a foundation for evaluating how Minneapolis is approaching current infrastructure expansion in low-income North neighborhoods. Through these cases one can see the importance of acknowledging residential diversity and history of place, and utilizing human infrastructure as a tool for development to ensure that all residents feel invested in results of bicycle planning initiatives.

CHAPTER 1: CONTEXT

I. Bicycle Trends in American Cities

For the first time in over one hundred years, America's largest cities are growing at a faster rate than their suburbs (Gallagher 2013). Changes in lifestyle preferences and economic factors are resulting in a reversal of long-time trends towards low-density, suburban development. The "American Dream" is no longer a single family home in a quiet residential zone, but a more vibrant way of living amongst the diversity found in urban areas. A major cause of this phenomenon is the role of millennials (born between 1977 and 1995) and what type of lifestyle appeals to them. For a number of reasons, this cohort is moving away from the cookie-cutter suburbs of their youth and the consumptive lifestyle that such settings foster. Seventy-seven percent of them prefer to live in urban areas, and that factor is playing a significant role in the residential and economic development of cities today (Gallagher 2013).

Numerous urban studies theories describe the impact of millennials' decisions on the current landscape of American cities. From urban planners to economists, everyone is trying to attract this cohort to their city, and appealing to their preferences is crucial for that success. Simultaneously however, these professionals need to consider the implications of simply having more people in an urban area, and what that means for existing infrastructure. I highlight these two concepts because they explain why the contents of this paper are so important in future urban development efforts. At the planning crossroads of accommodating

more people and considering the lifestyle preferences of millennials, while also maintaining an eye for equity concerns, lies a key concept: bicycles as a means of transportation.¹

Using bicycles as a planning tool holds significant potential for both city governments as well as residents (new and old), through a host of environmental and economic benefits. While I will later challenge some of the assumptions surrounding the inherent benefits of bicycle infrastructure, it is important to understand the potential advantages which could be derived from a well-implemented system.

On one hand, bicycles provide a more environmentally conscious alternative to automobile transportation. The first calls for better bicycle infrastructure came out of the environmental conservation movement of the 1970s, and were motivated by the potential fuel and emissions saved from riding a bicycle instead of driving (Hoffmann 2013; Mapes 2009). However today support for cycling comes from a much broader audience, including public health officials working to advance active transportation agendas and reduce obesity rates (Gordon-Larsen et al. 2009; Gotschi 2011; Pucher et al. 2010). Business owners have noted the economic benefits for themselves (Clean Air Partnership 2009; Drennen 2003; Lockwood and Stillings 1998; PeopleForBikes and Alliance for Biking and Walking 2013) and health benefits for employees (US Dept of Health and Human Services 2002) when bike lanes pass by their establishments. Even construction crews support bicycling and walking projects, as they create up to twice as many jobs per dollar as highway projects (Garrett-Peltier 2011).

Yet American cities were not designed with this vehicle choice in mind, and our auto-centric landscapes often create obstacles to safe and comfortable bicycling. A growing realm

¹ While that notion suggests cities should prioritize the desires of young professionals in urban planning efforts, it does not mean that I necessarily support that line of thought. It is a current urban development strategy, and is therefore worth analyzing further for impacts on other residents.

of urban planning and advocacy has recently emerged to remedy that condition. Bicycle and pedestrian planners are now commonplace in city governments, working to reconfigure landscapes which favor the automobile at the expense of people-powered transportation.

Not everyone approaches this movement towards greater “bike and ped” accessibility in the same manner, however. Some ascribe to a “build it and they will come” mentality, which promotes more infrastructure as the best way to get more people on bicycles. Others, for whom cyclist empowerment is the key to wider engagement, work through non-profit organizations to increase bicycle safety education. One could conceivably find any form of organization approaching the issue from any number of angles: public health, Transportation Demand Management, or urban sustainability, to name a few.

On the less planning-focused, more advocacy-oriented side of the issue, a similar band of diverse organizations and individuals have evolved with distinct approaches for improving bicycling. Some groups push policy for greater infrastructure funding designated for bicycle and pedestrian improvements. Others create online blogs or coalitions to distribute resources around safety and accessibility issues. Both types have blossomed in bicycle-friendly cities (such as Portland) as well as at the national level, as these issues are relevant across numerous scales.

In terms of infrastructure itself, cities are starting to distance themselves from a strictly auto-oriented layout. Bike lanes striped onto busy streets are no longer a complete anomaly, and protected bikeways (which create a physical barrier between cyclists and traffic) are slowly emerging in downtowns. Such lanes, along with separated paths, are becoming a tool for economic development and tourism as well. In Cleveland for example, the recently completed Cultural Trail is an off-street, eight-mile bicycle and pedestrian

connection between important heritage sites. Bike share systems are the next up and coming innovation, beginning with the Twin Cities' Niceride in 2010, and through the recent (and controversial) Citi Bike in New York City.

Across the nation these advancements are directing the public eye towards planning and funding for new bicycle facilities. In the following chapters I will address how such developments play into larger urban trends, as well as how they affect a range of urban residents.

II. Creative Class and Gentrification Concerns

Richard Florida's recently conceptualized Creative Class Theory provides a telling context for current movements towards better bicycle infrastructure. A renowned economist and social scientist, Florida created this term to describe relatively young professionals working in the creative industries driving our knowledge based economy. This cohort includes college educated intellectuals working in either the Super-Creative Core (designing new commercial or consumer goods, creating ideas or technologies on a daily basis) or knowledge-based industries (healthcare, finance, business, etc.). Florida predicts that the economic future of our cities depends on where these individuals chose to live, work and play, and attracting them has become a strategy for economic development in many struggling cities. This notion has guided the urban planning efforts of many post-industrial cities, as they strive to create more livable urban environments in the hopes of attracting the creative class and stimulating the local economy (Florida 2002).

In deciding where to live and work, individuals in this cohort place more emphasis on the "livability" of a city than on their prospects of finding a job there. The creative class

assesses lifestyle amenities such as the prevalence and type of restaurants, outdoor activities and cultural institutions present in a particular city or neighborhood, as a way of determining how livable it is. Downtown revitalization efforts that create Arts Districts or Cultural Districts are efforts to re-orient cities towards the cultural consumption preferences of the creative class. Milwaukee is one such example, where the development of 3000 new downtown condominiums alongside a “music district” and significant bicycle/pedestrian amenities aimed to “shift perceptions of the city from industrial to cultural, from production to consumption, and from declining rustbelt to fast-forward sophistication” (Zimmerman 2008, 231).

As demonstrated in Milwaukee, bicycle infrastructure is a key component of creative class-oriented development strategies. The lifestyle amenities desired by Florida’s young professionals include diverse transportation and recreation options, with an emphasis on bicycle and pedestrian-oriented ways of interacting with the built environment. They appreciate bike lanes and practical commuting infrastructure to get to and from their downtown offices during the work week. Yet they also desire off-street trail systems for recreational rides after work or on weekends, as places they can experience their environment in an active way, either biking, running, or walking (Florida 2002). Since his initial work, Florida (2011) has found a significant relationship between rates of urban bicycle commuting and the presence of the creative class, additionally noting that cities with greater concentrations of affluent, more educated workers have higher rates of bicycle commuting.

Urban planning focused on the creative class relies on a few core elements, altered to be consistent with local history and neighborhood character. The “livability” desired by this cohort additionally results from “authentic” feeling places including mixed-use residential,



Figure 1. Northeast Alberta Street (photo by the author.)

commercial and recreational spaces. Authenticity could be derived from architectural influences characteristic of the neighborhood's pioneering inhabitants. This includes anything from brick row-houses in dense Northeastern cities to old retail or factory space turned into apartment units in the Midwest. Developers across the country are buying up vacant warehouses in desirable up-and-coming neighborhoods to convert them into luxury condominiums. This trend is occurring in large cities such as Minneapolis, MN through riverfront development in former grain mill buildings, as well as in small urban areas like Auburn, NY, where an old piano factory has been converted into luxury condos. The creative class enjoys living in unique circumstances, places which offer more character than the cookie-cutter developments of their youth in suburbia (Florida 2002, Gallagher 2013).

From historic apartments looking out over street cafes to modern, eco-friendly condos built above retail and park development, the creative class appreciates the options presented by a variety of land uses. Figure 1 is an example of this development in Portland, OR, with outdoor café seating across from a new mixed-use development, housing a coffeeshop, bank and residential units. The low-density, strip-mall, suburban American Dream does not appeal to members of this cohort, who instead seek out residences in walkable, vibrant

neighborhoods (such as this one) resembling old fashioned Main Streets (Florida 2002, Gallagher 2013).

The creative class also influences the built environment through the type of retail establishments they support. As mentioned, members of the Creative Class appreciate a variety of retail and recreational opportunities in their neighborhood, ranging from grocery stores to health facilities to clothing outlets. However the income typical of careers in the creative industries allows this cohort a higher degree of wealth and economic opportunity to support higher-end businesses than many other urban residents. Therefore the grocery stores found in new, mixed-use developments are often focused on organic or specialty foods, such as Whole Foods or their regional equivalents. The health facilities are often yoga studios or institutions focused on “wellness” strategies such as acupuncture. Clothing stores may include Lulu Lemon (high priced athletic apparel for women) or expensive boutiques. Figure 2 is an excellent example of a streetscape shaped by Creative Class interests along NE



Alberta Street in Portland. Due to **Figure 2. Northeast Alberta Street (photo by the author).** the influence of this group, NE Alberta is now known as an “arts district,” with views like this one including a hair salon, arts and crafts boutique, and upscale French bistro with outdoor seating.

As streetscapes change with creative class migration back into the city, a number of other social dynamics come into play. Often the neighborhoods which appeal to this cohort are formerly working-class communities, now desirable for young professionals because of their architectural character and location in relation to downtown. Throughout the late 20th century as wealthier cohorts moved out of the city following new development into the suburbs, these areas saw a significant decline in investment. As rent became less expensive in the remaining housing stock, lower-income (often minority) residents moved in, perpetuating a cycle of succession. However as urban living regained its appeal in recent years, early gentrifiers such as artists and students moved in, taking advantage of low rent and close proximity to the diversity offered by higher density accommodations. Soon enough these neighborhoods appeared on the radar of higher-income residents looking to resettle closer to downtown, such as those in the Creative Class. Processes of gentrification followed close behind.

Gentrification is the influx of middle to upper-class residents in formerly working-class (often minority) neighborhoods with close access to downtown, which spurs private capital investment and forces up property values (Smith 1979). This can occur when developers buy a degrading property with architectural value at a low purchasing price, renovate it, and “flip” it, selling it at a much higher price than it was originally obtained for. Alternatively, individual home-buyers can come in and purchase a home relatively inexpensively, and restore it to its original aesthetic integrity. As the rate of neighborhood change gains momentum, surrounding housing prices and property values rise significantly, often pricing out long-time residents (Newman and Wyly 2006).

Additionally, as the neighborhood attracts new residents and new investment, businesses in the area begin to turnover as well, catering to the gentrifying clientele. Since the economic priorities of the Creative Class are based on a higher salary than many urban residents can afford, the new wave of retail establishments are generally less accessible to many low-income residents; a process known as commercial gentrification (Ayer 2012). For example, in Portland, Oregon a New Seasons grocery store is opening in a rapidly gentrifying community. New Seasons places an emphasis on locally sourced, organic foodstuffs, and accordingly is not an affordable option for the lower-income, long-time residents of the surrounding neighborhood. Across the board, when developers see the potential for new mixed-use development in these highly desirable areas, their tenants are more likely to demonstrate Creative Class retail preferences.

III. Literature review

The intersection between cycling infrastructure and the politics of gentrification has come under extensive academic scrutiny as of late. There is a growing body of literature reaching all corners of the social sciences as to the effect of revitalization efforts aimed at Florida's Creative Class on social tensions over the built environment, especially resulting gentrification. Florida (2011) himself has measured a significant relationship between bicycle commuting and the Creative Class, noting that cities with greater rates of bicycle commuting also contain higher concentrations of affluent, more educated workers. Researchers are going beyond this correlation however to discern what these trends imply for the urban social landscape.

As previously discussed, there is a growing movement to improve the bicycle accessibility of urban areas in the United States. Many cities are implementing bike share systems, striping bike lanes and improving infrastructure to make more room for cyclists on the street. At the same time however, there are disparities around who feels comfortable using these facilities, which need to be addressed. In many places cycling is still a white male dominated activity, as evidenced both by on-the-ground bicycle counts as well as in government positions related to bicycle planning (Moudon et al 2005; Tanzman 2013; Geller 2009). Not only is there an historic lack of transportation infrastructure in many minority communities, but rates of accidents and death are much higher for African American and Hispanic populations than for white cyclists, suggesting an education and comfort gap as well (Sierra Club and League of American Bicyclists 2013). Racial trends are also reflected in new bike share systems as users are overwhelmingly white; a result of barriers in geographic layout and payment systems which disproportionately disadvantage minorities and low-income residents (Sierra Club and League of America Bicyclists 2013). Recently national organizations supporting bicyclist interests have begun calling for greater attention to these disparities, in the hopes of re-establishing the bicycle as a safe, reliable form of transit for everyone.

The emergence of bike lanes alongside gentrification in a number of metro areas calls for a closer examination of cyclist themselves. I would like to examine two prevalent mentalities of cyclists in recent movements towards a new urban bicycle culture, to assist in understanding how they are perceived by other urban residents. The first of these aligns well with the class of early gentrifiers; that is young, educated, artists and creative individuals who were the first to move into diverse neighborhoods, before it became trendy to do so.

These residents often composed the rugged, outgoing bicycle messenger class, focused on vehicular cycling² and riding aggressively regardless of accommodations available for cyclists. Such residents provided the foundation for many people's perceptions of urban cyclists. As Mapes states in *Pedaling Revolution*, "...this is what the new urban bike movement is about, creating a new feeling of empowerment and independence. It is also painting a new image of urban hip that is slowly replacing that old picture in America of adult cyclists as either hapless losers or elite but niche athletes in garish spandex" (2009, 91). Mapes goes on to describe how this group of 'preachers and artists' became the spokes-men and women of a new bike culture.

The second mentality towards urban cycling has appeared more prevalently in recent years, and is more focused on advocacy to make the bicycle a reliable means of transportation for everyone. Advocates have been advancing urban cycling for years, but as issues regarding accessibility have evolved, so have the actors involved. There is an increasing focus on equity in bicycle planning, as found in the undercurrents of bike blogs such as BikePortland.org and planning newsfeeds such as Planetizen or Atlantic Cities. Organizations dedicated to advancing the cycling cause in the U.S. have added positions focused on social justice concerns, including the League of American Bicyclist's recently established "Equity Initiative Manager." Of this group Mapes says, "They may cherish the

² Vehicular cycling refers to the belief that bicyclists should behave just as any automobile driver would, taking the full lane and asserting their full right to the road, often aggressively. This is a popular, traditional school of thought amongst cycling advocates (Lugo 2013b). The opposing school suggests that cyclists should yield to other traffic and work around existing traffic patterns, often advocating for bike lanes and bicycle specific infrastructure on the road. This group will be more relevant later, as many (including Furness 2010) posit that "vehicular cycling advocates" do not sufficiently acknowledge socioeconomic, physical, material, and cultural factors which influence people's transportation choices (pg 73).

bike culture they've created on the streets, but their goal, in the end, is for it not to be a culture at all, but to simply be one of the routine ways that we get around" (2009, 117).

Another important component to understand is the way that cycling projects can become intertwined with other urban trends and take on racial significance. For example Gibson (2013) explores how the bicycle became a symbol for racist neighborhood changes in the Washington D.C. metro area leading up to the 2010 mayoral election. Throughout the late 2000s the City's campaign to attract new residents narrowed in on affluent, single, young professionals; resulting in a radical reshaping of the city's social and economic landscape. Advertisements for the "City living, D.C. style" campaign prominently featured recreational cyclists in a less-than-subtle appeal to the creative class. Accordingly for many, bicycle infrastructure became a symbol for the overwhelming gentrification which occurred as a result.

Gentrification in D.C. further polarized the city along racial lines, as the wealthier newcomers made the city younger and whiter, along with more affluent. Here gentrification is not just seen as the rich displacing the poor, but rich, young, white newcomers displacing poor, old, black residents. Many African Americans became frustrated with the City as teachers were laid off and schools closed in working-class minority communities in the name of a budget crisis, while new dog parks and bike lanes appeared in more affluent gentrifying neighborhoods. The tension was clear as "cyclists had, in addition to being associated with class privilege, also become celebrated as something of a gentrifying folk hero in certain urban policy circles" (Gibson 2013, 7). As a result, in the 2010 mayoral election, "bike lanes" became a symbol used by the incumbent's opposition to represent a host of criticisms from his polarizing term in office (Gibson 2013).

A similar tension arose in the Humboldt Park neighborhood of Chicago in 2003 when the City proposed building a bike lane through the Puerto Rican business district. Initially this was to be an expansion of a bike lane from nearby “gentrified, bike crazy” Wicker Park into the low-income Latino and African American community along a stretch of road known as the Paseo Boricua (Puerto Rican Way). However as Alex Wilson, executive director of the nonprofit bike education center and retail shop West Town Bikes/Ciclo Urbano noted, “There was a sense that bike lanes were being imposed rather than proposed” (Greenfield 2012). The project was therefore put on hold until a few years later when supporters had garnered sufficient neighborhood approval. Much of the eventual community support came from framing the project as a public health amenity, in addition to the creation of a traffic and safety committee for a diverse group of resident to provide input on and oversee future infrastructure projects. Wilson attributes the success of the now functioning bike lane to the City’s patience in waiting until residents were ready to support this project as their own: “This is bike lanes when the community was ready for bike lanes, so this was a good move socially and politically” (Greenfield 2012).

The divisive relationship between cyclists and gentrification is an interesting notion to pursue further, as the bicycle itself is seen as a source of equity in emerging mobilities studies. America’s automobile-oriented society has historically privileged those with access to cars and perpetuated patterns of residential segregation (Sanchez and Brenman 2007). Accordingly the stigmas associated with alternative transportation options have never allowed low-income urban residents to benefit from the same level of mobility and what is equated with societal freedom. According to Sheller (2011, 291), “Roads and highways dominate the built landscape, and the over-arching mobility culture remains on in which

automobility is normalized as freedom, and associated with wealth and privilege.” The bicycle therefore provides a potential alternative to freedom that is not tied to automobile use and the financial resources required to maintain that vehicle.

However as it stands, Sheller argues, simply increasing bicycle accessibility through infrastructure improvements will not adequately address long-standing associations between automobile use and a better position in society (2012). Moving forward, altering the social meaning around bicycles is a crucial component of normalizing bicycle use, and increasing the mobility of populations without access to automobiles. Sheller states, “Simply inserting more public transit, a few bike lanes, and some electric vehicles into existing patterns of automobility actually resists transformative change because it leaves unchallenged the underlying culture of autonomous mobility, the spatial and social relations that go along with automobility, and the landscape of cultural discourses that equate personal mobility with freedom” (2012, 291).

Understanding these attitudes towards cycling and the presence of bicycles in the urban landscape is crucial to not just contextualizing the following case studies, but in creating more equitable transportation development in the future. Gibson (2013, 5) uses Hall’s (1996) concept of conjunctural analysis to suggest that “although cycling and bike lanes may be articulated tightly to a particular class... and take on specific social meanings in one moment, these articulations may be contested and reworked through subsequent rounds of struggle, thus investing cycling with different social meanings, with novel political effects.” Furness (2010, 9) too supports that articulations of the bicycle are socially constructed based on “an entire field of cultural practices, discourses and social forces.” This notion gives me hope that future policy and programming efforts can reshape perceptions of

the bicycle as such a polarizing vehicle, and allow for greater utilization of existing urban infrastructure for all communities.

CHAPTER 2: METHODOLOGY

I. Bicycle Accessibility

To thoroughly understand the social dynamics surrounding bicycle facilities, I first examined what was on the ground, the history of how they came to be, as well as aspirations for future increases in accessibility. I have been familiar with these cities for quite some time, having visited Portland on numerous occasions and lived there for a summer preceding this project, while spending the last three years as a resident in Saint Paul (across the Mississippi from Minneapolis). For this project I conducted field work in Portland for another two months over the summer before returning to a final year in Saint Paul, in order to strengthen my visceral knowledge of the city. For both cities I began exploring further by examining goals for bicycle infrastructure development as expressed by the city government. I monitored local bike blogs and mainstream media, and additionally drew from academic literature.

While on location I spent substantial time engaged in participant observation. In Portland I frequently rode through neighborhoods with a reputation for gentrification (Bates 2013), pausing in each to take counts of bicycle parking facilities and business type as a proxy for retail gentrification. Across the city I witnessed innovative designs in use and felt the ease of being a cycling commuter in Portland. I rode recreationally on off-street facilities providing an escape for residents of the once-industrial North. I additionally organized or partook in a number of rides which are cornerstones of Portland's cycling culture, including those associated with Pedalpalooza, Sunday Parkways and Bridge Pedal.

Minneapolis observations are based on three and a half years of residency in the Twin Cities. In Minneapolis I have spent years riding the renowned greenways through Midtown, along the Mississippi River, and those connecting the city's lakes (part of the Grand Rounds trail network). Through two semesters interning with a Transportation Demand Management non-profit in nearby Saint Paul as well as with the Sierra Club Northstar Chapter in Minneapolis I familiarized myself with alternative transportation politics in the Twin Cities. The implementation of Nice Ride (the Twin Cities bike-share system) during this time added additional material for study.

To give a policy context to my field work, I analyzed planning documents and attended meetings for the formulation of long-term planning objectives. In Portland these included working groups (composed of citizens, advocates and planners) to determine future transportation corridors and investment plans. In Minneapolis I supplemented City planning documents with a Bicycle Advisory Committee meeting and a mayoral candidate forum on transportation, in addition to events through my internships. This exposure was crucial in understanding the nuances behind power and planning in each city. Witnessing who was at the table and what discussions occurred there, I was able to pick up on a number of subtleties about the current state of cycling in each city.

II. Social Implications

Once determining the general tone each City had set for cycling in the metro, I moved on to historical research of infrastructure development in specific neighborhoods where my two case studies took place: North Portland and North Minneapolis. Analyzing the policy

events and important actors in bicycle development alongside important spatial and social characteristics of those communities, I arrived at the conclusions presented in this paper.

Throughout this process semi-structured interviews continued to be my most valuable source of information. I interviewed experts in a number of fields, including advocacy, planning and active transportation, and looked for the influence of social justice concerns in their work. I was fortunate enough to meet with scholars involved in social equity around cycling and advocates in city government positions working to increase cycling accessibility. All of my interviewees presented me with insight from their own personal experience, ranging from organizing outreach efforts for a new greenway to cycling as a woman of color.

As a result, I highlighted two specific initiatives, one in each city, which brought to light underrepresented voices in the bicycle community. Combining common themes from this input with existing literature in Urban Social Geography, I hope to contribute to the discussion of what bicycle infrastructure means to underrepresented communities in America's best cycling cities.

III. Limitations

As an undergraduate thesis this study is necessarily limited in scope. As a white, 21 year old college student from a rural area in New York State, I was somewhat of an outsider in the communities I studied, which undoubtedly influenced the way people reacted to my presence and questions. Especially approaching notions of racial equality, my access to understanding was inherently limited without being a member of the affected cohort. Yet these limitations aside, I hope this paper adds to a growing literature surrounding social equity concerns in the current movement towards greater bicycle accessibility. Cities need to

achieve a balanced approach to more equitable sustainable transportation options, while acknowledging the cultural histories of communities facing systematic discrimination and underinvestment. My hope is that this paper will spur additional constructive conversations from actors both inside and outside of the bicycle movement.

CHAPTER 3: PORTLAND

As with most things bicycle-related, this study begins in Portland, Oregon. Consistently ranking first or second in *Bicycling Magazine's* list of America's Most Bicycle-Friendly Cities, Portland is frequently lauded by cycling advocates in the U.S. The infrastructure and culture surrounding bicycles in Portland makes it unlike any other American city, and it often serves as an example for metros looking to "green" their transportation systems. Yet the Rose City did not become a cycling mecca overnight. Forward-thinking city planners and outspoken bicycle advocates struggled for years to make an impact on the once auto-oriented region. This section will outline the major events and characters which have shaped Portland as we know it, before looking at the social implications of using bicycles as a tool in a sustainability-oriented planning agenda. This background is crucial in understanding how the bicycle has become a contentious symbol for underrepresented communities in Portland.

I. Bicycle Infrastructure

Cycling in Portland fits into a much larger picture of sustainable transportation development. The City of Portland is unique in that it is part of an elected regional government, Metro, which covers the entire Portland Metropolitan Area, or Clackamas, Multnomah and Washington counties. This regional planning body serves to address issues surrounding quality of life and the environment (such as clean air and water) which do not stop at municipal boundaries. Starting with regional planning efforts in the 1950s, residents organized to discuss issues of future growth and development, resulting in the formation of

Metro in 1978 (Abbott and Abbott 1991). Metro's most notable accomplishment was establishing an Urban Growth Boundary around the Portland Metro Area in 1979, limiting future urban development to protect surrounding rural environments.

The transportation infrastructure in the Portland area thus relies on planners at Metro and within the city government, as well as the actions of TriMet, the body responsible for organizing public transit in the region. Through collaboration from all parties, Portland is home to an expansive network of bus, light rail, commuter rail and streetcar lines, not to mention an aerial tram. These projects helped Portland to be named the #1 city in America for transit by U.S. News & World Report in 2011 (Holeywell 2012). Throughout my interviews it became evident that people are moving to Portland specifically to live car-free lifestyles, and an expansive transit network is a crucial piece of making that possible (Ginenthal 2013; Roach 2013).

With an emphasis on accessibility and environmental sustainability in the metro area, it is no surprise that Portland planners were among the first to formally integrate bicycles into their transportation network. In the 1990s the city was the first in the nation to hire a Bicycle Coordinator, Mia Birk, to spearhead a campaign for greater bicycle accessibility. With the assistance of a few innovative planners and a desire to be the best in the nation, Portland gradually built up the 330+ miles of on and off-street bicycle facilities which they pride themselves on today



Figure 3. Wayfinding signage on NE Russell Street (photo by the author).

(Portland Bureau of Transportation 2008). However Birk (2010) details in her book *Joyride* how this was a much harder process than many people assume based on Portland's current outlook towards cycling. She spent years hosting small community meetings to garner resident support for infrastructure changes, often resulting in blank stares or downright disdain. It took relentless resident engagement as well as collaboration with the City to create space on the streets for cyclists, and then to begin educating Portlanders as to what these new spaces meant.

Due to Birk and her colleagues, the City also implemented European-style cycling amenities found few other places in the United States at the time. Protected waiting areas for cyclists at stoplights and bike-activated signals at busy intersections are both results of their



Figure 4. A Sharrow on NE Tillamook Street (photo by the author).

efforts (Birk 2010). Often Portland pushed for these installations before national guidelines or standards had included them, making them more difficult to implement despite their relevance. The struggle was worthwhile, however, as simple infrastructure amenities such as these give many residents the extra reassurance that they were welcome in the street on a bicycle.

Accordingly they have greatly increased the number of Portlanders who choose a bicycle as their primary or secondary choice for running errands or commuting to work (Geller 2009). Another Portland innovation is the Sharrow, or a share-the-road arrow, as shown in Figure 3. These markings identify neighborhood streets as bike boulevards, chosen because of minimal automobile

traffic and their ability to connect with main cycling corridors. These routes are crucial in encouraging residents to use their bicycle for short trips to the corner store or for visiting neighbors.

Wayfinding signage, such as in Figure 4, is found throughout the city to make cycling routes more accessible to residents and tourists alike. To encourage cyclists in the (relatively) dense downtown, the City installed signs displaying the direction and distance via bike route to surrounding amenities, such as Portland State University or the waterfront. Signage also exists in residential areas, as Figure 4 shows a sign demarcating a bike route through the Northeast neighborhood of Eliot. This particular sign directs riders towards bike lanes on North Williams and Vancouver avenues, the major north/south connection to downtown.

II. Bicycle Culture

Beyond the built environment, Portland is home to a bicycle-crazed culture unlike any other. The city's slogan "Keep Portland Weird" helps explain the "Freak Bikes" or "Double Decker Bikes" which tower above most other street traffic, and are brought out in droves by the numerous rides and events cyclists organize every year. For a three week stretch in June the city is flooded with bicycles and riders of all shapes and sizes partaking in Pedalpalooza; a festival of sorts, during which anyone can lead a themed bike ride about anything, anywhere. From the world's largest Naked Bike Ride, to rides that stop in a few neighborhood parks for brief yoga sessions, this is a resident-led invitation to partake in Portland's unique bike culture.

Based on participant observation while living in Portland for two summers through two Pedalpaloozas, the rides they facilitate are extremely inclusive in nature. I began my

research in Portland just as the festival 2013 was kicking off, and was able to co-lead a ride in my temporary home, North Portland. At the suggestion of a friend, we led a ride to see the Little Free Libraries present in our neighborhood, and had about 15 people join us. Attendees included two families with young children (one actively involved in city bicycle politics), a young couple, three 20-somethings, and a group of elderly women. They covered the whole spectrum of experience and ability, and reflected the diverse range of who Pedalpalooza can bring together.

Portland is also known for its monthly Open Streets event, Sunday Parkways. These events temporarily close urban roadways to automobile traffic in order to allow cyclists and pedestrians to take over the street. What results is an 8 mile-long block party through residential neighborhoods and local business corridors. Local companies and city/neighborhood organizations set up tents and activities along the way to give the event an added focus on community. The routes change every month to introduce residents to a new quadrant of the city (there are five) and hopefully draw out new participants along the way. Sunday Parkways have been so successful, 60% of Portlanders were familiar with the event within the first five years of its existence (Ginenthal 2013).

A final consideration of the culture around cycling in Portland should assess the more practical, day to day uses of the bicycle. Still leading the nation in rates of bicycle commuting, 6.1% of Portland's working population reports cycling as their primary mode of transit. While a respectable figure, advocates in Portland would like to see rates increasing similar to Minneapolis in second and Seattle close behind (Figure 5), which have not reached the stagnation of Portland's figures (Andersen 2013). As with cycling in general, Portland bicycle commuters are still two-to-one male-to-female, and as with Portland in general,

bicycle commuters are majority white. For many there is still a feeling that cycling is for young hipsters on single speed bikes or commuters decked head-to-toe with gear. These perceptions will be further addressed through the case studies to follow.

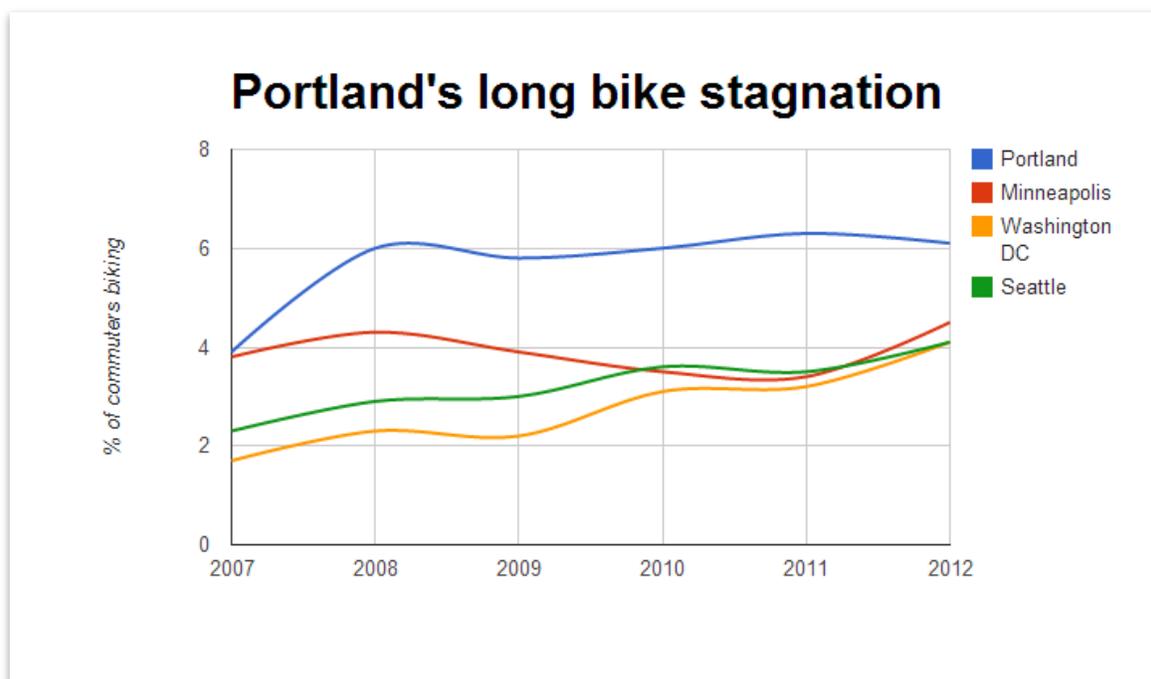


Figure 5. Changing commuter cycling rates in bike-friendly cities (courtesy of Michael Andersen, Bikeportland.org).

III. Future Plans for Bicycle Infrastructure

While progressive infrastructure and culture make Portland an anomaly among American cities, many Portlanders still say it isn't enough. Advocates here have stopped aiming to be the best in the nation and have set their sights on an even bigger icon in the cycling world: Amsterdam. As Jeff Mapes (2009), a political journalist and long-time bicycle commuter, discusses in his book *Pedaling Revolution*, Amsterdam is one of the most iconic cycling meccas in the world. Due to a traffic system and cultural norms which favor cyclists and pedestrians, 27% of all trips in the city are made via bicycle (Mapes 2009, 65). When

you cross a street in Amsterdam you are not looking out for automobiles, but instead are wary of the streams of bicyclists on their morning commute or heading to the grocery store. Cycling as a form of transportation is a well established norm in Amsterdam, with business people riding alongside scruffy teenagers, none breaking a sweat or minding the weather as they pedal along. This is the dream for many Portlanders who want to see continued improvement in their city: The Amsterdam Look (Kransky 2013).

The culture in Amsterdam towards cycling has been colloquially labeled by planners and advocates as “The Amsterdam Look,” signifying universal acceptance of the bicycle as a common sense means of transportation, for anyone. When businessmen ride by in suits, just as many women pedal confidently to the office in heels and a pencil skirt, and no one feels concerned enough to wear a helmet, *then* you have made it as a premier bicycle city (Geller 2009; Mapes 2009). While 14.5% of Portland residents chose bicycling as their primary or secondary commuting mode in 2006, after a 190% increase in the city’s bicycle commuting from 1990 to 2005 (Geller 2009), they still have yet to achieve The Amsterdam Look and total normalization of the bicycle (Kransky 2013).

Looking forward, Portland is implementing a number of strategic plans and initiatives which aim to make cycling the default transportation choice in the city. The Climate Change Action Plan, Regional Transportation Plan, Portland Plan, and Bicycle Master Plan all include measures to make bicycling a safer and more accessible transit option. These are all long-term working goals for the Portland area which are regularly revised to achieve a more environmentally, socially, and economically sustainable metro in the future. Together they aim to better the infrastructure, policy and programming around cycling to increase the mode

share of bicycle trips to more than 25% of the city's total by 2030 (Bower et al. 2009; Geller 2009).

In addition to long-term infrastructure plans, advocates hope that The Amsterdam Look will be aided by the city's greatly anticipated bike share system (Ginenthal 2013; Kransky 2013). Alta Planning recently won a bid to bring just about the only cycling-related program Portland did not have to the city: bike share. Portlanders are extremely proud of their public transit system and the ease with which you can reach downtown from almost anywhere in the city. Yet many say it is still difficult to get around once you arrive downtown. A new bike share system aims to close some of those gaps and make the area even more accessible. Multiple cycling advocates I spoke with in Portland romanticized about how bike share would help business people get across downtown for lunch meetings or short trips (Ginenthal 2013; Kransky 2013), their professional attire promoting that Amsterdam Look all the while.³ As one advocate stated, "In bike share we see the promise of delivering a transportation option for people that really shows that bikes are for everyone, not just hipsters on fixies with skinny jeans and tattoos or guys in spandex" (Kransky 2013).

IV. Residential Trends: Balancing a Segregated History with Progressive Development

Portland's reputation for cycling has made it an incredibly popular place for young people to live, especially those in Richard Florida's recently conceptualized Creative Class. While the City of Portland has not explicitly prioritized appealing to the Creative Class, their

³ Alta is still seeking private investment to help launch the bike share system, and the initial start date has been indefinitely postponed from the spring of 2014. At the time of this writing funding partnerships were still not solidified, and many residents were expressing concern over the financial sustainability of such a network (Aunt Mary's article 2013). Concerns also exist about whether the City should have prioritized a bike share system over other infrastructure improvements (Kransky 2013), such as sidewalks in underserved East Portland.

planning emphasis on livability has attracted them all the same. The migration of young professions to the city has not been easily absorbed however, with a limited amount of housing stock in existence and an urban growth boundary that prevents city expansion beyond its set borders. Therefore these new residents (backed by a comfortable income) began eyeing “diverse” neighborhoods with dynamic property markets on the edges of downtown as prospective sites to settle down. In other words, new, young, primarily white residents began buying in what was formerly the heart of the city’s African American community, beginning a tense process of gentrification (Hoffmann 2013).

This process has a number of negative connotations for existing residents, as it often results in rapid resident turnover when long-time community members cannot keep pace with rising rents or property taxes (Smith, 1979; Newman and Wyly 2006). Additionally, as landlords sell their suddenly desirable housing stock to developers looking to profit from a large rent-gap, the overall supply of affordable rental units decreases, making it harder for low-income residents to find housing (Newman and Wyly 2006). In my interviews I discovered that it was not uncommon for low-income residents in gentrifying neighborhoods to relocate to the suburbs where housing was more affordable. Unfortunately with limited employment opportunities in the area, most of these residents were forced to keep their jobs in downtown and increase their commute substantially (Roach 2013).

Gentrification resulted in a number of changes for the remaining residents of Albina as well, the Northeast Portland neighborhood with the greatest rate of resident turnover. In particular, the lifestyle amenities prioritized by the Creative Class were not congruent with the economic priorities of lower-income residents in the community, as discussed previously. This was evident in the rapid turnover and commercial gentrification of businesses along

North Williams Avenue, the main commuter corridor connecting downtown to the Northeast neighborhoods, running through Albina. African American owned establishments that were present along North Williams since the 1950s were replaced by boutiques, restaurants, a micro-brewery, and a number of alternative medicinal/health and wellness facilities throughout the 1990s and 2000s. As of 2013 only a handful of African American owned businesses remained (Hoffmann 2013; Mirk 2012), in a community that once constituted the heart of Portland's African American population (Gibson 2007). This process supports notions of commercial gentrification and the "bleaching of Northeast" identified by social justice advocates, as a wave of new white residents has drastically altered the former cultural landscape of Albina (Ayer 2012).

While such population shifts appear to provide an economic benefit to the city as a whole, they can have devastating effects on the social fabric of long-term community residents. Many residents could no longer afford to live in Albina with the rapidly rising property values associated with gentrification, and many who could no longer feel welcome with the changing community composition. For many, this recent wave of gentrification-related displacement was reminiscent of the neighborhood clearances of the 1950s, 60s and 70s, when the city razed entire blocks to construct Interstate 5 and the Legacy Emmanuel Hospital complex (Gibson 2007; Hoffmann 2013; Lansing 2005; Lubitow and Miller 2013). The impact of those redevelopment efforts were felt most heavily by Portland's African American community, as up to 80% of the city's minority population were forced to live in the affected neighborhood due to post-war red-lining and residential discrimination (Gibson 2007, 8).

Portland's history of racial discrimination leads back to World War Two, when Henry Kaiser recruited over 100,000 workers to Portland to run his shipyards along the Columbia River. Over 6,000 of them were African Americans, three times the pre-war black population of the city. Existing housing stock could not meet this rapidly rising demand, so Kaiser constructed Vanport, a housing experiment just north of existing city limits for 40,000 black and white workers (Jewel 2005). When the war ended there was essentially nowhere for many Vanport residents to go, especially African Americans, as the real estate industry's extremely discriminatory Code of Ethics allowed them to settle in only one neighborhood: Albina (inner Northeast Portland). As a result many stayed on in Vanport until a flood in 1948 devastated the shoddily constructed village, leaving 18,000 homeless, 25% of whom were African American (McGregor 2003).

With such high demand for housing in the city at this time and thousands of African Americans struggling to find adequate accommodations in Albina, the real estate industry finally revamped its Code of Ethics in the 1950s (McGregor 2003). Yet due to red-lining and discriminatory lending practices, many blacks still settled around this neighborhood. By

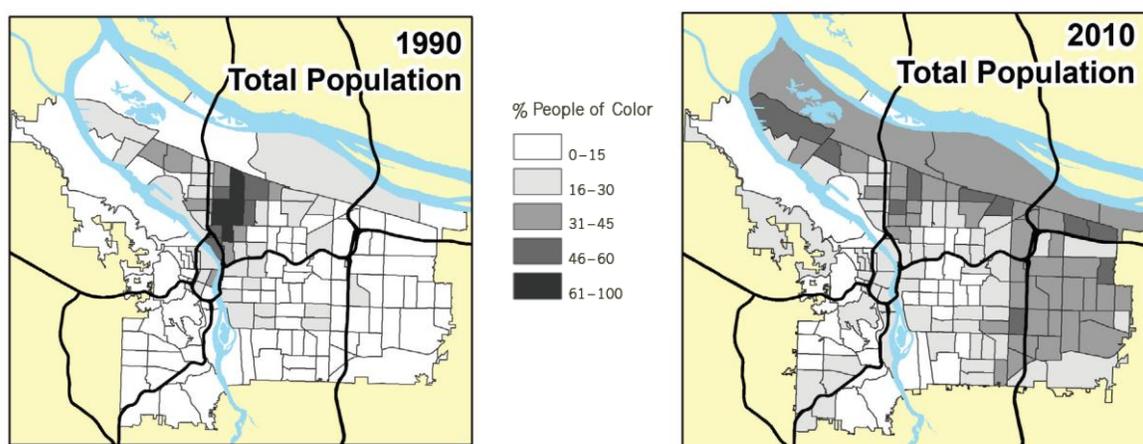


Figure 6. The intense segregation of inner Northeast Portland prevailed until the 1990s, and has dispersed due to gentrification-related displacement in the 1990s and early 2000s (courtesy of the Portland Bureau of Planning and Sustainability.)

1960, 73% of Portland's 10,000 African American residents lived in Albina, and the city's schools were as segregated as those in Alabama (Gibson 2007, 10; McGregor 2003). Thus throughout the 1950s and 60s, when the city chose to clear large tracts of homes in inner Northeast to construct the Memorial Coliseum (476 houses) and Interstate 5 and the Legacy Emmanuel Hospital expansion (1100 housing units), the latter of which was never actually built, the African American community viewed each as explicitly racist acts (Gibson 2007, 13; Jewel 2005; Mirk 2012).

Even with widespread clearances in the name of urban renewal, Albina and surrounding neighborhoods remained home for the vast majority of Portland's African American population. With this sordid history of development, it is not surprising that residents feel uneasy around a growing presence of gentrifiers in their neighborhood. The rapid turnover of homes is bringing a wave of change to inner Northeast (see Figure 6), and the impact of African American residents on the landscape is diminishing with each passing year. While waiting on a bench outside a recreation center in Albina one morning, an older African American woman pointed out to me the lot where she spent her childhood until her house was demolished in an urban renewal initiative. Afterwards I was acutely aware of the



Figure 7. Opposing structures at an intersection in the Albina neighborhood (photos from Google streetview).

demographic composition of the rec center patrons: about a 50/50 split between older African Americans, who all seemed to know each other based on the humorous jesting taking place, and white women between the ages of 20 and 40, either unaccompanied or in pairs. Walking throughout the neighborhood I noticed churches on every other block, all in various states of disrepair and badly needing aesthetic maintenance. Figure 7 is an interesting example of two structures across the street from one another, exemplifying the gap between private home investment through processes of gentrification and the lack of financial community support for a traditionally black religious institution (presumably due to the decreased African American presence in Northeast).

To summarize, in a city where the effects of long-standing racial discrimination were still carried by residents of Northeast, the sudden change in demographics from gentrification-related housing turnover did not go unnoticed or uncontested. Newcomers to Albina were by and large representative of Richard Florida's Creative Class, bringing with them a host of priorities not held by current low-income residents. This tension is crucial to understand how a simple bike lane development through Northeast Portland led to a wake-up call for bicycle advocates across the city.

V. How the Bicycle Became a Synecdoche of Gentrification in Northeast Portland

The themes discussed here of gentrification, the Creative Class, bicycle infrastructure and inequality came together in Northeast Portland in 2010 through the North Williams Avenue Traffic Safety Operations Project. North Williams Ave is the main commercial corridor through Albina, connecting downtown Portland with neighborhoods to the Northeast. Bicycle commuters know it as a two wheel arterial, with a popular bike lane

connecting residential greenways with access to bridge crossings and downtown. This proposed project recommended widening the existing bike lane on North Williams, as there were six times more cyclists using it than when it was first constructed, creating traffic problems from increased use (Mirk 2012).

Before discussing community reactions to this project, one must understand the demographic changes simultaneously occurring along North Williams which affected the area's physical and social landscapes. As gentrification changed the demographic composition of communities along this corridor, retail establishments began catering to the new clientele. Retail gentrification, as this process has come to be known, completely changed the face of North Williams as African American owned businesses were replaced by restaurants and higher-priced services aimed at the gentrifying Creative Class (Gibson 2007; Hoffmann 2013; Lubitow et al. 2013; Roach 2013).

Of the many businesses which once populated North Williams Ave, only a handful are still owned by African Americans, as new boutiques have ousted the cultural institutions and retail establishments that once gave life to this community (Gibson 2007; Hoffmann 2013). I spoke extensively with Sherifa Roach, a 30-



Figure 8. New mixed-use development along North Williams Ave. Formerly the House of Sound record shop, this property now supports residential units above restaurants, a gelato shop and a soap boutique (photo by the author).

something owner/operator of a pop-up bicycle repair shop who works out of a stationary school bus in her driveway, less than a block off of North Williams. She differentiated (through description, not specific terminology) between early gentrifiers such as herself, people who moved to Albina in the late 90s because of the cheap rent (\$600/month for a house with four roommates), and the Creative Class now paying enormous amounts for newly constructed condominiums along North Williams.

She noted the first few retail changes that came to the neighborhood, starting with Pizza a Go-go, the Lompoc microbrewery in 2005, and most recently the onslaught of four-story mixed-use development just around the corner from her home. She acknowledged the changes occurring along the avenue that made it more expensive to frequent local businesses, such as the New Seasons upscale grocery opening later this year. The few retailers who had survived through this turnover did not do so unchanged, but had to adapt to the gentrifying clientele as well. When discussing the owner of the local Going Street Market, Roach said, “go look at his wine selection, you’ll see what I mean!” In light of these economic changes, the imposition of improved bicycle infrastructure through this neighborhood was perceived by long-time residents as yet another step towards community change in which their input held no power.

Meanwhile cycling advocates assumed that improving this link in the bicycle network would improve the city’s overall accessibility and be consistent with city-wide sustainability goals, and therefore pushed the measure without a second thought. As previously discussed, the most vocal and politically active group of cycling advocates has roots in the environmental conservation movement of the 1970s, and is primarily motivated by the prospect of bicycles as a clean transportation solution for our over-consumptive society

(Cohen 2013; Lugo 2013b). As self-identified cycling advocates working tirelessly to improve bicycle infrastructure in our auto-oriented landscape, they tended to view themselves as the minority in planning communities; speaking up for the most sustainable future for our urban areas (Lubitow et al. 2013; Cohen 2013). Yet many visions exist for what a “sustainable” city should include, and the underlying assumptions of this politically empowered group surrounding their vision have never been questioned. The main reason for such oversight is that bicycles have generally been perceived as better than the auto-centric alternatives they have fought against for years.

While the cycling advocate cohort has evolved since the 1970s and diversified in motivations, it still consists of a white male majority (Furness 2012; Hoffmann 2013; Tanzman 2013). The perception of cycling advocates and accordingly cyclists themselves has therefore come to reflect this, with many minorities feeling excluded by the movement towards greater bicycle accessibility. Despite the fact that minority rates of cycling are increasing much faster than their white counterparts, the majority of cyclists are still white (League of American Cyclists and the Sierra Club 2013). Thus when the City of Portland allotted \$370,000 to expand an existing bike lane through Albina along North Williams Avenue, long-time residents viewed it as a prioritization of their new, white, gentrifying neighbors, and as yet another blatant disregard for their infrastructure appeals (Mirk 2012).

Through this project it became clear that cycling advocates long concerned with environmental sustainability have not always sufficiently considered what other community voices exist in planning processes, and in this case did not take into consideration the history of development in the affected community. Long-time residents in Albina (many African American) had been asking for city funding towards pedestrian safety improvements and

better schools for years, without receiving financial assistance. Yet as soon as white, middle to upper-income gentrifiers gained a strong foothold in the community, *then* the neighborhood received funding for a bike lane (Hoffmann 2013; Kransky 2013; Mirk 2012)? This perceived imbalance in consideration of different resident needs therefore became a source of great tension between neighborhood residents and city-level bicycle advocates and planners.

Instead of being able to celebrate the infrastructure improvement as an amenity for North Portland residents, the project became loaded with a host of negative connotations. The feeling that bicycle infrastructure was being imposed upon them by an outside force meant that Albina residents did not feel personally invested in the project, did not feel any ownership in it, and did not see the potential benefit it presented for their community. To established residents this conflict was the last straw to questioning what type of sustainability investments the City was prioritizing, and more importantly, which residents' opinions mattered in that process.

The matter was worsened by the City's limited engagement with community members in the planning process immediately preceding the North Williams project. In a report by the City Club of Portland, community representatives noted that African American residents were still acutely aware of the legacy of former injustices surrounding transportation and development. Specifically, the aforementioned construction of Interstate 5, Memorial Coliseum, and the Legacy Emanuel Hospital expansion left the community with deep-rooted distrust of City economic initiatives in their neighborhood (City Club of Portland 2013). The North Williams bike lane thus became a "symbolic issue... triggering these very

emotional legacies of people feeling disenfranchised over and over and over, which they were” (Lugo 2013b).

After significant demands from the community for more extensive stakeholder engagement and public discussion, the project was eventually reevaluated and implemented. Through dozens of meetings and leadership from a reformed project committee, the North Williams undertaking transformed into an intentional discussion of historical racism, disinvestment and exclusion between the City and the community. With greater stakeholder input this initiative went beyond bicycles and pedestrians to highlight issues such as affordable housing and community trust, permanently changing the way City officials approach infrastructure improvements in Portland.

Therefore due to the legacy of urban revitalization efforts, neighborhood demographic changes occurring alongside the North Williams Avenue project, and the minimal/nonexistent community engagement before implementing the project, bicycle infrastructure came to represent the city government’s prioritization of younger, white homeowners’ concerns. Albina residents viewed the North Williams bike lane expansion as a tool to “further erode the character of the community through gentrification” (City Club of Portland 2013), and support citywide economic initiatives not meant to benefit the surrounding neighborhoods. Thus while not opposing the action of bicycling in itself, the bicycle became a synecdoche of gentrification and neighborhood change in which minority, in this case African American residents felt they had no control. Therefore the negative connotations many community members associated with gentrification and experienced racial inequalities translated into backlash over a bike lane. As Midge Purcell, policy director

of the Urban League of Portland, was quoted in a Portland Mercury article (Mirk 2012) about this project,

The City of Portland's policies want to encourage increased cycling and environmental friendliness, that's all very well and good. But when people feel that those values are imposed upon them, especially when there's been all the other historic impositions on the community, then it really does become about a lot more than just putting in a bicycle lane. In a lot of ways, this is a real test. To see whether some of the lessons have been learned from previous projects where the outcomes have been really, really poor.

Thus the African American community in Albina seized the North Williams bike lane as an opportunity to confront the underlying systemic issues which consistently altered the physical and social composition of their neighborhoods. The potential benefits provided by greater bicycle accessibility were negated in light of larger social contentions. The City's insufficient outreach and consideration of community priorities meant that residents of Albina did not feel ownership of the project, and reacted defensively to what bicycle advocates assumed would be an amenity. The implications of Portland's assumption-heavy approach to bicycle infrastructure will be instructive in promoting bicycles as an amenity in the future.

CHAPTER 4: MINNEAPOLIS

To put Portland's situation into context, I wanted to compare the planning conversations spurred by North Williams Avenue with those occurring in Minneapolis. As cities with similar reputations for both bicycle accessibility and creative class livability, were bicycle infrastructure developments causing the same social tensions in each locale? With the recent establishment of the Nice Ride bikeshare system and the ongoing development of the North Minneapolis Greenway proposal, Minneapolis provides an interesting case study for the social implications of bicycle infrastructure. Did Minneapolis learn from Portland (and others') mistakes in the bicycle planning process? How does the City approach bicycle planning initiatives in historically marginalized communities? Comparing the two cases provides insight into the best path forward for future equitable development efforts.

I. Bicycle Infrastructure

Constantly jostling with Portland to gain *Bicycling Magazine's* top honors of America's Most Bicycle Friendly City, Minneapolis is home to an incredible network of on and off-street bicycle facilities. The larger of the Twin Cities, Minneapolis boasts 85 miles of trails and 95 miles of on-street lanes, half of the latter constructed within the last two years (City of Minneapolis 2014b); a timeframe which consequentially coincides with the creation of a Bicycle Coordinator position in the city government (Holt-Shabazz 2014). Between this position and the increasingly active presence of organizations like the Minneapolis Bicycle Coalition, conversations around bicycle accessibility have become more than just a footnote in planning proceedings.

Minneapolis planners have recently adopted a number of design elements similar to those found in Portland. Sharrows now designate neighborhood bicycle boulevards, and

wayfinding signage at major trail intersections helps new cyclists navigate the existing infrastructure. They have even tested out safety improvements such as green bike lanes along 15th Avenue SE, where bright green paint alerts drivers to cyclists' right of way. Additionally they have implemented median islands at a Greenway trail crossing to make it safer for cyclists to traverse four lanes of traffic (City of Minneapolis 2011).

However when people talk about cycling in Minneapolis, they are generally focused on the larger system behind these small amenities. Paved off-street trails circle the city, connecting residents from the Mississippi River to the Uptown lakes, to Twins baseball games at Target Field in downtown. This expansive trails system dates back to the Minneapolis Board of Park Commissioners around the turn of the 20th century. Under the leadership of Horace Cleaveland and Theodore Wirth, the Minneapolis Grand Rounds trail system used greenways to connect parks along the lakes and Mississippi River. The trails map from that era is remarkably similar to that of today, as the City added paved pathways along these connections in the 1970s to form the foundation of Minneapolis' off-street bike trail system. While these early developments were aimed most notably at recreational riders, they motivated the Minnesota Department of Transportation to utilize federal funding for an expansion of the trails system around downtown in the 1990s. During



Figure 9. The Midtown Greenway, just west of the Mississippi River Trail connection (photo by the author).

that time citizens and the Minneapolis Park and Recreation Board also organized public and private funds to obtain land (much formerly belonging to railroads) and create a number of new trails (City of Minneapolis 2014a).

The Midtown Greenway is an especially notable component of that system. Completed in 2006, the Greenway is the result of a 17 year initiative to improve cycling connections in South Minneapolis.

Residents can now ride all 5.5 miles from the Mississippi River to the western suburb of St. Louis Park along a sunken railroad corridor, completely separated from traffic (Midtown Greenway Coalition 2014).

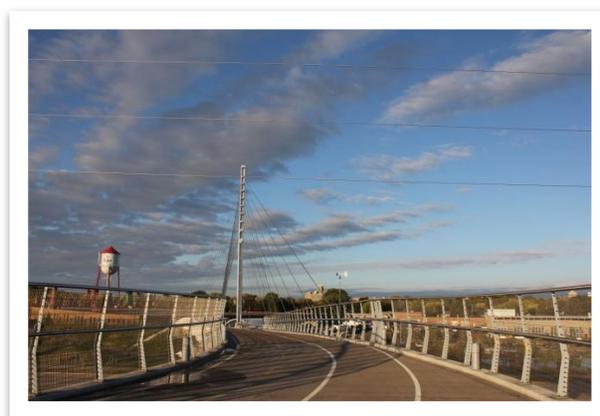


Figure 10. The Sabo Bridge along the Midtown Greenway (photo by the author).

USA Today recently selected the Midtown Greenway as the best urban bike trail in the nation (Lebetkin 2013), thanks to the winter plowing, night lighting and emergency call boxes along the route; not to mention incredible design features such as its own suspension bridge (Figure 10). As Figure 9 shows, the trail is open to bikes and pedestrians, with demarcated laneways for cyclists headed in each direction alongside a walking lane.

Ahead of Portland in at least one regard, Minneapolis is also home to the Nice Ride bike sharing system, thanks to a funding commitment from BlueCross BlueShield of Minnesota. As the first program of its kind in the U.S. (Hoffmann 2013), Nice Ride kicked off in Minneapolis in 2010 with 700 bikes at 65 stations, and soon expanded into Saint Paul. Today Nice Ride has 146 stations and over 1500 bikes across the Twin Cities, with the

majority of rides occurring in Minneapolis. The most recent phase of expansion collaborated with the National Parks Service and placed stations along the Mississippi River Boulevard/Trail; reinforcing the value of bike sharing for recreational purposes as well as for functional trips (Nice Ride Minnesota 2014).

Minneapolis is similar to Portland not only because of its expansive bicycle network, but also in the regional nature of the planning organization which supports it. The Twin Cities metro area is served by the Metropolitan Council, which aids in planning efforts for the economic growth and prosperity of the area. Similar to Portland's Metro, the Met Council focuses on livability issues such as housing, parks, transportation and water management (Metropolitan Council 2014b).

This organization is currently developing Thrive MSP 2040, a long-term planning document aimed at promoting stewardship, prosperity, equity, livability and sustainability throughout the region (Metropolitan Council 2014a). By focusing on these guiding themes throughout policy and project development, the Met Council hopes to integrate sustainable development initiatives throughout the entire seven-county metro area. The regional nature of this planning body has ensured the development of bike trails beyond just the City limits, and will be highly influential in making the Twin Cities a bicycle friendly region in years to come.

II. Bicycle Culture and Impacts of Bikeway Development

The bicycle culture in Minneapolis can be approached on a number of scales. At a governmental level the City of Minneapolis has committed to increasing cycling infrastructure in the hopes of attracting more young talent and spurring economic growth. As

Adonia Lugo, anthropologist and bicycle equity advocate explains, “for people concerned about transitioning into this more creative, experienced-based, lifestyle economy, ‘if you build it they will come’ means talented people are going to want to come move to our city” (2013b). In other words, cycling facilities are seen as an amenity to increase the city’s ‘livability’ and sustainability in a direct appeal to the Creative Class.

Former Mayor R.T. Rybak made it very clear throughout his time in office that developing bicycle infrastructure would have a direct impact on Minneapolis’ reputation as an exciting city, with much to offer a growing class of young professionals. Such amenities would form the basis of citywide sustainability efforts, while complimenting the art galleries, luxury apartments, and trendy restaurants appealing to this economically influential class. Looking past the inherent benefits of cycling as an activity, Rybak emphasized that decisions regarding bicycle infrastructure are “more about the kind of city we want” (Hoffmann 2013, 181); in other words, the kind of city we can market to mobile young professionals.

Rybak’s commitments have visibly impacted the built environment of certain Minneapolis neighborhoods. Most notably, the development/promotion of off-street bicycle facilities has spurred residential and mixed-use development along major bicycle thoroughfares. The Mill District along the Mississippi River Trail boomed as developers converted old riverfront warehouses into luxury condominiums and constructed new apartment complexes on surrounding land. Likewise, newly constructed transit oriented developments along the Midtown Greenway are making room for the city’s expected increase in Creative Class residents. This development raises concerns about the rate of affordable housing construction and maintenance of low-income housing stock, however, as public and private resources are focused on attracting young professionals to Minneapolis

(Hoffmann 2013). Florida (2002) argues that the City will come out on top with such a strategy as businesses move to areas like this supporting ample numbers of Creative Class residents. Yet planners and developers need to be mindful of who may face displacement or neglect in this economic green-washing.

Minneapolis bicycle culture can also be examined at the level of individual ridership. The city is unique among others known for their cycling prowess because of one large, unavoidable barrier cyclists must face for four to five months of the year (optimistically): winter. This is a city where downtown is connected by an intricate network of skyways to avoid even walking outside in the frigid weather. At the time of this writing, the temperature in the Twin Cities is hovering around zero with a wind chill of -24 degrees Fahrenheit; less than ideal for a comfortable bicycle commute. Yet the arctic temperatures and almost 50 inches of snowfall a year do not prevent a dedicated core of commuters from cycling year round. In this city it is often said (only half in jest) that the bike lanes are plowed before the roads (Friedman 2011). The City is committed to tackling problems associated with winter cycling, such as built-up snow pushing cars into bike lanes and snow left from imprecise plows at trail on-ramps (Peterson 2013). Add to that equation the local bike shops that offer winter cycling classes and supply winter bike gear, and you get one bold group of hardcore commuter cyclists.

In the summer months though, cyclists have a strong presence on the streets and parkways of Minneapolis. Bike racks at the Uptown lakes are always overflowing from beach-goers, and bicycle commuters in downtown are reaching peak rates of 4.5%; second in the nation only to Portland (Andersen 2013). Various non-profits and bicycle organizations are also experimenting with a number of innovations to increase that ridership statistic. A

group of non-profits have joined the University of Minnesota in promoting a bicycle commuter incentive program, ZAP, which gives riders “credit” for cycling every time they pass an electronic reader, which are situated throughout the Twin Cities. Cyclists can then get credit towards their healthcare plan at the University, or if they are unaffiliated with the U, they are entered to win prizes every month.

The active lifestyle of Minneapolis residents, paired with a renowned trails system, creates the perfect environment for a bicycle-friendly city. Cycling through winter gives the battle-hardened cyclist a few extra bragging rights, while the other seven months of the year invite the more laid back souls out onto the Midtown Greenway, Mississippi River Trail, or the Grand Rounds routes. After cycling in Minneapolis, one can see why Portland should be scared.

III. Future Plans for Bicycle Accessibility

The City of Minneapolis plans to expand its bike network significantly in the years to come, and there are numerous government agencies and non-profit organizations already working on the bike plans of tomorrow. Beyond the Met Council’s Thrive MSP 2040, the City of Minneapolis has developed the Minneapolis Comprehensive Plan (2008), Access Minneapolis (2009), the Climate Action Plan (2013), and the Bicycle Master Plan (2011, part of the Access Minneapolis Ten Year Transportation Action Plan) which all lay out frameworks for moving forward with infrastructure improvements.



Figure 11. Example of a protected bikeway in New York City (photo courtesy of Jim Henderson, Wikimedia Commons).

In discussions of future infrastructure developments, there is a changing emphasis on whose input is considered and what types of designs the City should be aiming for. The Bikeways for Everyone initiative is a product of the Minneapolis Bicycle Coalition and a number of partner organizations/businesses, working to create more

bikeways to benefit more people. The first major goal of the campaign (of two) is to support the 30 miles of

protected bikeways in Minneapolis by 2020, as recommended by the Bicycle Master Plan.

Supporters specify *protected* bikeways (also known as cycletracks) seen in Figure 11, which refer to those with a physical barrier between cyclists and other forms of traffic. These types of lanes aim to make it safe for everyone to use their bikes, regardless of age or skill level.

Lanes of this type are not present anywhere in Minnesota yet, but the coalition recently helped gain approval for construction of the Washington Avenue protected bikeway: a modified first attempt at this infrastructure, located along a popular Minneapolis avenue connecting the University of Minnesota West Bank campus with downtown (Holt-Shabazz 2014).

The second goal of Bikeways for Everyone is to get people of all ages and experience levels to feel comfortable riding a bike, and to feel as though these upcoming bikeways were created for them. The coalition is teaming up with businesses, restaurants, cultural and neighborhood organizations, schools, and churches, to empower both “non-cyclist” and

“cyclist” entities on our streets. According to Malik Holt-Shabazz, Community Organizer at the Minneapolis Bicycle Coalition, “we want *everybody* in the city to feel like when that happens on Washington, when that [protected bikeway] gets constructed, that everybody’s got a right to that” (2014). Holt-Shabazz framed disparities in cycling populations as an “access issue,” noting that both infrastructure and education are needed to ensure that all communities benefit from future bikeway development. This campaign is an inspiring example of how cycling advocates could and should be approaching future cycling improvements, and will be addressed in more detail in the final section.

IV. North Minneapolis Greenway Development

The concepts behind the Bikeways for Everyone campaign discussed above are precisely what led me to undertake this analysis. While discovering that bikeway developments in Portland went awry when negative associations with bicycling combined with insufficient community input, I was immediately captivated by plans for a greenway development in North Minneapolis. Knowing that Minneapolis is branding itself as an up-and-coming hub for the Creative Class through sustainability initiatives and a progressive mayor, I wanted to delve further into the nuances of developing a bikeway through a diverse, lower-income community on the outskirts of downtown. How were residents reacting here to an initiative which at first glance resembled that of North Williams in Portland? Were there more than geographic similarities between the neighborhoods in North Portland and those in North Minneapolis? Most pertinently, with both city governments expressing sustainability priorities and pushing bicycle development, what could be learned from this example that

may have been left out of Portland’s development strategy? These types of questions provided the basis for the following analysis, which aims to address some of these concerns and come away with recommendations for future bikeway development efforts.

North Minneapolis is a diverse area, home to the city’s highest concentration of African American residents, and still increasing. Figure 12 reflects how demographics have changed over the last 30 years from a 75% white to a majority minority community. By the time racial distribution reached this state in 2010, 10 of 13 North neighborhoods had more

Race	% of the Population in 1980	% of the Population in 2010
White	75	30
Black	16	43
Hispanic	2	8
American Indian	2	1
Asian	1	13
Other, Two or more races	4	5

Figure 12. Changing demographics of North Minneapolis (data drawn from Ashmore 2011, table constructed by the author).

households below the poverty threshold than the city average of 21.5%, with the highest reaching almost 54% (Minnesota Compass 2014). Neighborhood leaders from this area are disheartened by the historical lack of investment received by their communities, and the lack of city services which benefit their neighborhoods.

Transportation issues are currently a major focus of justice advocates in North, as the Metropolitan Council and the City of Minneapolis are working towards expanding the light rail and transit systems out of Downtown and through their community. By attending a

transportation equity forum held by Minnesota Congressman Keith Ellison in March 2014, it became apparent to me that North Minneapolis residents want and need to be included in any transportation developments which transect their neighborhoods. It is crucial for the economic and social advancement of North residents to be more intimately connected with employment opportunities in downtown, as well as across the metro.

These connection concerns are nothing new, with residents citing an historic need for better access to transportation from their communities to the rest of the city. In 2010 when the Nice Ride bike share system was first launched, many residents were appalled that no stations were placed in North Minneapolis (Williams 2010). Now this complaint is heard almost everywhere bike share systems are implemented, and is almost always met with neutral regret on behalf of the supporting agency behind the system. Those in charge of siting argue that for a bike share system to be economically and logistically self-sustaining, it must start in a dense network closely surrounding downtown. Once a critical mass of connectivity is reached there, it can branch out and begin to incorporate more neighborhood stations. The argument boils down to economic self-sufficiency as a prerequisite for equitable siting decisions (Kransky 2013).

While I will not take a stance on this controversial debate, it is an important one to keep in mind while examining the case of North Minneapolis. Once the system was off the ground and running, Nice Ride did respond to complaints with ten new stations in North Minneapolis, with siting based on input from a handful of community meetings (Kretman Stewart et al. 2011). According to Sarah Stewart of the Minneapolis Department of Health and Family Support, “It was never really a question of community support for having them [in North Minneapolis], it’s more a larger question of how do you meet the needs of lower-

income populations and also recognize that it's less dense and there are fewer destinations in these areas" (2013). Again, involved parties have to balance those concerns while acknowledging who and where people can benefit from bike share stations. Stewart stated that the process of expanding Nice Ride into North Minneapolis was relatively straightforward in terms of demand and response, it was just slightly delayed from the launch of a dense downtown network.

On the heels of this development (2011) Twin Cities Greenways put forth the suggestion for a street-to-Greenway conversion through the Willard Hay, Folwell and Webber-Camden neighborhoods of North Minneapolis. Twin Cities Greenways is a non-profit organization which identifies corridors throughout the Twin Cities that would be ideal locations for such bicycle facilities, building off of their first success with the Midtown Greenway. This group partnered with community organizations to bring a handful of design proposals to neighborhoods in North Minneapolis, asking for resident input on which facilities would be appreciated nearby. The concept of "greenway" could refer to any number of designs, including the full conversion of a street into a lateral park with biking and walking paths (eliminating space for automobiles entirely) or a simple bike boulevard, with bicycle symbols painted on lower-traffic streets and equipped with traffic calming infrastructure (City of Minneapolis 2014c). Promotional materials available on the City's website depicted the full greenway conversion option, complete with idyllic landscaping and users diverse in race, age and activity preference.

In the initial planning stages over 200 community members participated and expressed favorable attitudes towards the general concept. Without any specific route suggestions, the idea of new green space in their neighborhood and a safe route for bicycling

downtown held significant appeal for most of the community members involved. Residents saw great potential in a greenway for not only connecting existing green spaces in North Minneapolis, but for creating new community gathering spaces as well. “The way people were talking about it, it was much more than a bike project” (Stewart 2013). Residents put forth suggestions such as planting fruit trees and creating community gardens along the vertical park, incorporating neighborhood priorities into the design stages.

Based on this support, the City became involved a year later (summer/fall of 2012) with state funding through the health department for an active transportation initiative. City staff and partnering organizations drew from an open house with around 100 attendees, as well as over 450 online surveys (half from North Minneapolis residents) to start narrowing down design features and route siting. In response to early feedback, the proposed Greenway design connected green spaces (four parks and a cemetery) with youth-serving places such as schools (three of them) and a YMCA. Staff then took this design back to the community through online surveys, as well as mailings to everyone along the route (including renters and landlords).

With two initial rounds of input already under consideration, the city held another round of five public meetings. Of those in attendance, 60% supported the proposition, 20% opposed it, and 20% were either neutral or waiting for more information before taking a position. Many had questions that the City was not yet able to answer, concerning the effects of street alterations on existing residents. In an interview Stewart (2013) recapped the importance of this process, stating,

We heard a lot of questions we don't have answers to yet and concerns that still need to be addressed, like 'will homeowners be assessed for this? What will happen to

home values and property taxes? How will people with disabilities access their homes? How will we make sure guests can still park and get to homes? What about the alleyways, they're in pretty bad shape and if that's the only way I can access my home...' It was a good process. We figured out what we need to know to be able to tell the community so they can make a decision.

Clearly the City of Minneapolis and its collaborators have made a significant effort to gather community feedback on the plan. Yet a few glaring problems exist where Stewart wishes they had collected more comprehensive data regarding demographics. In initial outreach efforts, no attempt was made to collect information on race, ethnicity or age of survey respondents. Yet based on attendance at community meetings, Stewart has a strong feeling that they have only heard from a very narrow slice of neighborhood interests: those being white, middle-aged or older, and English-speaking. She fears that the City is not yet getting input from a representative sample of the population. For example 94% of survey respondents were homeowners, in an area with historically the highest foreclosure rates in the city (Chin et al. 2011). The population of North Minneapolis is almost half African American, whereas the homeownership rate for African Americans in Minneapolis is only 20.4%, the lowest rate of any racial group in the city (Chin et al. 2011). With these data in mind, 94% becomes a significant warning that additional, alternative outreach is necessary.

This deficiency was recently picked up by the Hmong community in North Minneapolis as well. A recent survey conducted by Hmong high school students approached 20 Hmong families living along one of the three suggested Greenway routes. Of those surveyed, only one woman had heard about the proposed Greenway project, and no one responded that anyone had asked their opinion of it. Based solely on the map of proposed

routes provided by the surveyor, only one young girl voiced support for the street alterations (Clark 2014).

The Hmong residents surveyed had concerns around safety and future parking availability if their street was altered for a bikeway. The former of these fears stems from their children's experiences riding bicycles in North Minneapolis. They reported multiple incidents of children being pushed off a bicycle while the perpetrator stole it and rode away. These concerned parents were wary of a new bikeway if there were not significant commitments to maintaining the safety of children riding on it.

The other main worry of Hmong residents in this survey centered around parking availability. Multiple families stated that they often hosted family gatherings, and were concerned that guests would have nowhere to park. One family reported 12 people and eight cars in their household, and a heavy reliance on street parking to compensate for their insufficient driveway. (While I would like to think the presence of a bikeway would provide sufficient accessibility to downtown that a few of those cars could be eliminated, that may be ignoring other factors at play in this family's living situation.)

Fortunately City staffers like Stewart recognized that outreach efforts were not reaching a sufficiently representative audience, and they applied for a Blue Cross Blue Shield (BCBS) Center for Prevention grant to conduct more extensive research. They received funding, and are just beginning a three year "robust community engagement process" to determine whether or not this is a project that the community truly wants and will support. Community buy-in is crucial for the greenway to progress, and the City wants to ensure that a broad base of neighborhood support exists before completely altering any streets. As Stewart (2013) stated, "the City's current position is that 'there's nothing definite about this,

you can still say you don't want it and we won't do it,' but we don't think that will happen.”

Up to this point, people have participated who are highly supportive of this type of infrastructure in their community. So the City is “honoring all the engagement that has been done, but also acknowledging that we haven't talked to enough people yet” (Stewart 2013).

Regarding that last point, the BCBS funding allows for a new type of hyper-specific outreach to engage a wider range of community residents with greenway discussions. The City is awarding grants of \$500 to \$5,000 to community groups to engage with their members in whatever ways they deem relevant. This could mean church groups hosting a picnic to discuss what they would like to see from any form of greenway development, for example. Such an innovative approach to outreach is a monumental shift in engagement for this project. Now staff are bringing bicycles to an arena where residents can access them as they relate to their own shared experiences. With discussions prompted by existing community leaders, in social and cultural institutions people are personally engaged with, there is a much higher likelihood that North Minneapolis residents will feel more invested in any developments that move forward from such a forum.

Looking to the future, City staff hope that support built during the planning and engagement process will result in some iteration of a “Friends of the North Minneapolis Greenway Coalition.” Ideally residents along the route will not only be involved in planning and development, but will serve as a community voice during implementation and eventual use as well, assuming that the project does get implemented someday. In a portion of the city where residents' requests are seldom answered by those in power, this effort could be a much-needed breath of fresh air for community members, as long as it is done right.

CHAPTER 5: RECOMMENDATIONS FOR FUTURE BICYCLE INFRASTRUCTURE DEVELOPMENT

“Regardless of potential long-term changes in the demographic makeup of bicycle use in Portland, the current perception (justified or unjustified) of bicycling as benefiting an already privileged segment of the population cannot be ignored” (City Club of Portland 2013).

The growing focus on cycling in U.S. cities is not likely to dissipate any time soon. Rates of bicycle use are rising, and the economic and environmental benefits of bicycle infrastructure are starting to turn heads in planning circles. Yet as the case studies in Portland and Minneapolis have shown, newly implemented bicycle infrastructure will not be positively received and utilized by all segments of the population without a few fundamental changes. Moving forward it is crucial that cities focus planning discussions around making the bicycle a more accessible, less stigmatized vehicle for all communities.

For one, this can be accomplished through a more inclusive planning process that considers the physical and social networks already in place, through which historical considerations of neighborhood development are acknowledged. City representatives must recognize that any infrastructure improvements are an opportunity to integrate multiple community priorities into alterations of the built environment, especially those which have not received sufficient attention in the past. As Gerik Kransky of the Bicycle Transportation Alliance puts it, “can we address racial and ethnic disparities with the transportation facilities that we’re building? Maybe not. But there are opportunities to bring other elements of community priorities in whenever we’re having a conversation about reconfiguring the street environment so that we’re meeting multiple goals with a single project; rather than just

bringing the bike lane that is perceived to bring white people, right? Let's open up these conversations to a broader participation" (2013).

Additionally, the utilitarian appeal of bicycling is highly dependent upon confronting the polarizing status of the bicycle, and reaching out to those who still do not feel comfortable taking to the streets on two wheels. The melee of urban trends occurring in step with bicycle infrastructure development left many with distinct notions of who such facilities belong to, and who has a right to use that urban space. Adonia Lugo summarizes this notion well, stating

The thing about bike infrastructure is that it's become this kind of symbol of something that really is unrelated to bicycling or the bike movement. It's become a symbol of the fact that, for a long time there was this shift in the U.S. towards moving away from city centers and some people were allowed to do that, and some people were not allowed to do that. And so now that a lot of the children and grandchildren of people who moved away from city centers are going 'but living in cities is great! Let's move back! This makes so much more sense!' and they've got this ethical, moral, rationalistic perspective on it. They're moving back into city centers and encountering the legacy of white flight and the legacy of disinvestment and are frankly unprepared to really deal with that. Because they weren't there, they didn't experience the, you know, discrimination and the racism, and the problems of a lack of anybody [caring] about these neighborhoods at a city scale. So now bike infrastructure has become the symbol of that. (Lugo 2013b)

If we do not acknowledge this bigger picture history, we cannot hope to successfully integrate bicycle use into communities with a legacy of imposed development. It is crucial

for planners and advocates to understand where communities are at, in terms of both physical and social infrastructure, before the intended benefits of bicycling can be appreciated and accepted by a wider audience.

The final sections of this analysis will tie together the effects of these recent urban trends, while suggesting a less confrontational future for bicycle infrastructure development. The following conclusions and recommendations are shaped by Hall's (1996) concept of conjunctural analysis, which suggests that "although cycling and bike lanes may be articulated tightly to a particular class... and take on specific social meanings in one moment, these articulations may be contested and reworked through subsequent rounds of struggle, thus investing cycling with different social meanings, with novel political effects" (Gibson 2013, 5). By acknowledging residential diversity and history of place, and utilizing human infrastructure as a tool for development to ensure that all residents feel invested in results of planning initiatives, city governments and bicycle advocates can break down the polarizing connotations of bicycle infrastructure to reframe it as a utilitarian mobility solution.

I. "There's a Highway Everywhere"-Jason Tanzman, Cycles for Change

The story of development in Portland and Minneapolis is not unique. Similar patterns of urban redevelopment swept across all major US cities in the 1950s and 1960s, leaving minority and low-income communities to redefine meanings of urban space. While contemporary planning initiatives cannot make up for the transgressions of past governments, cities do have a duty to acknowledge and learn from their predecessors' actions in order to create equitable developments moving forward.

As explained by bicycle advocate and equity scholar Melody Hoffmann (2013), residents involved in North Williams Avenue community conversations are still haunted by the historical disinvestment and devastation of their neighborhood for the sake of the City's overall economic strategy. According to Kransky (2013), this African American neighborhood was subjected to repeated discrimination and physical alterations for regional development purposes, rather than receiving city funds for localized infrastructure improvements. As he states, "a lack of deference to that racist history that the City of Portland has had in place, initially redlining the district and establishing neighborhoods where only black people could live based on real estate and then capitalizing on a corridor type approach to transportation there, that maybe doesn't fit with the needs of the people who live in the community, but fits with the needs of the sort of broader, white power structure," cannot be easily forgotten.

Jason Tanzman of Cycles for Change got to the basic heart of the matter, noting that "there's a highway everywhere." Every city has planning skeletons in their closet which greatly altered the fate of affected low-income neighborhoods. The important lesson to learn moving forward then is how to acknowledge that history and the diverse range of lived experiences valued by community members in implementing new infrastructure initiatives.

This plays into how planners and governments consider the economic and political forces which perpetuate the social processes facilitated by landscape alterations discussed above. Long-term patterns of disinvestment in affected communities coupled with contemporary demand for central city living set the perfect stage for controversial development projects such as bicycle infrastructure. Yet the bicycle itself is not the source of contention in this case, it is the larger social and economic processes which the bicycle stands

for (Cohen 2013). When residents associate the negative externalities of gentrification (such as displacement and rapid demographic change) with the highly visible increased presence of cyclists in their communities, they are identifying a tangible target on which to focus their dissatisfaction with the larger processes at hand. It is not the vehicle itself, therefore, which inspires such resentment, but the overarching economic process which residents perceive as eroding their community security (Cohen 2013).

As it stands, many planners and advocates do acknowledge the role which their projects and developments will have in processes of neighborhood change. As Gerik Kransky states in regards to his work highlighting future development initiatives for the Bicycle Transportation Alliance in Portland, “We tried to informally as staff answer for each of the projects that we decided to move forward. And those criteria include equity, they include innovation, include affordability, includes a couple other things that you don’t really see reflected in the survey or in the document itself, but it’s the gut-check on viability and just, overall goodness” (2013). The risk of such informal accountability, however well-intentioned, is that people tend to focus on the potential benefit of their ideas and alterations. When designing or supporting a change in the landscape, no one sets out to create something intentionally horrible, according to one’s personal worldview. Yet we all interpret the world through our own lived experiences and values, and without acknowledging which lens our neighbors are looking through, we risk missing potential insult or opportunity for advancement.

Kransky (2013) acknowledges that the BTA could do more to incorporate voices outside of the usual cycling circles into their crafting of long-term programming goals. Like Stewart (2013) discussing future Greenway development in North Minneapolis, there is

always room to improve in regards to more equitable outreach. When it comes to which voices are heard in any City decisions, Holt-Shabazz notes that “it’s hard say there’s no equity in that” (2014).

II. “Community as an Asset” –Malik Holt-Shabazz, Minneapolis Bicycle Coalition

Moving forward, improvements in bicycle infrastructure need to center around community as a planning asset, in conjunction with rather than opposed to input from bicycle advocates and planning professionals. This suggestion necessitates a re-ordering of the planning process, to ensure that community input is involved in step one, rather than as an afterthought. This is a common sentiment among bicycle advocates focused on equity. Malik Holt-Shabazz of the Minneapolis Bicycle Coalition hopes that in the near future “more and more of these developers/public planning entities [will] start to see community as an asset for planning and that they’re central to planning, and that they’re not coming to the community after things are well-underway” (2014). Without a more nuanced inclusion of community-level dynamics, prevailing perceptions of cyclist demographics may cause city-wide initiatives to result in backlash, such as that from North Williams Avenue.

The ideal outcome of new infrastructure development involves a diverse range of participants all feeling welcome in that space, an outcome which requires a greater emphasis on social considerations than the traditional planning process currently facilitates. Holt-Shabazz states that at the Minneapolis Bicycle Coalition, “we want everybody in the city to feel like when that happens on Washington, when that gets constructed, that everybody’s got a right to that” (2014). Without proper input in the earliest planning stages, people do not want to access new infrastructure. They feel like they do not have a right to that space, or that

amenities were not created for *them*, perpetuating the polarizing effect of bicycle infrastructure.

There are a number of ways to break this cycle, and all include meeting the community where they are at before pushing forward with progressive infrastructure. This could be done through identifying community groups who already have an interest in bicycling, or those who are working on access and mobility issues. Working with existing neighborhood organizations to discover how cycling is relevant to them and what improvements they would like to see is the best way to ensure community buy-in with existing infrastructure, as well as with the development of new facilities. The Minneapolis Bicycle Coalition therefore focuses on engaging with these organizations and building relationships that will eventually lead to greater resident participation in bicycling.

Accordingly, the Coalition recognizes the value of working with a diverse range of organizations to build on existing support for and understanding of bicycling in Minneapolis. These collaborations can take any number of forms, through which the Coalition tries to offer their support as a resource for existing efforts. High school students at South High School in Minneapolis took the initiative to form an environmental group called Green Tigers, and were very involved in lobbying and planning for the Midtown Greenway. The Coalition also partnered with the Corcoran Neighborhood Association, whose members were already working on campaigns to create safer connections to the Greenway in their neighborhood.

The Coalition works to garner greater support for cycling facilities by connecting with all of these organizations, because they all approach the issue with different backgrounds, different priorities, and represent different cohorts of the broader community. Holt-Shabazz (2014) cites this diversity as the best way to move cycling advocacy forward:

“that’s the thing that’s going to strengthen all of these campaigns, not only here in Minneapolis, but around the nation. It’s going to high schools, going to churches, going to places that have been eyeing a bikeway for awhile now and just haven’t figure out how to get it done.”

That last quote reinforces that the key to this approach lies not necessarily in who initiates the conversation about bicycling, but around who initiates *interest* in bicycling. Holt-Shabazz provided examples of how the Coalition serves as a facilitator or resource for community organizations, rather than as an outside force imposing bicycles on a group. He states that if the Native American Community Development Institute (for example) wants to engage their bicycle commuters by hosting a dinner or event, he will be there to support them and provide information. However the Coalition recognizes the value of collaboration over imposition when it comes to encouraging hesitant cyclists. Then “later on, when you’ve activated networks in all these dif places, you just have to make a phone call! ‘How do you feel about that, we know you’ve been meeting?’ We’re about that! We don’t have to be the clearinghouse for everything bike” (Holt-Shabazz 2014).

In Portland, too, the Bicycle Transportation Alliance (BTA) tries to approach community members and supporters with an open offer of support. According to the BTA’s Advocacy Director Gerik Kransky (2013), “we still start the conversation with a question around what are your priorities? We start every conversation that way so that we remain grounded in the current state of the business, right? ...we want to know, with whoever we’re talking to, how they feel, what their experience is, what things they could change if they could, un-tethered to stuff like [policy]. We’ll talk about our priorities after.” That approach was central in the formation of the BTA’s 2013 Blueprint for World-Class Bicycling, which

aims to “ensure that riders of all abilities, regardless of destination, have access to a safe place to ride” (Bicycle Transportation Alliance 2013).

Advocates in Minneapolis are turning to another strategy, linking residents’ lived experiences around the bicycle with suggestions for future plans. According to Holt-Shabazz (2014), “everybody has a bike story.” By tapping into how people relate to bicycles, the Minneapolis Bicycle Coalition is better able to meet people where they are at, and accordingly confront relevant needs or alleviate concerns through specific education and empowerment efforts. Through this approach they are “building reciprocal relationships, and you’re going to have a way stronger campaign if you go to a neighborhood group or business and say hey, we see you doing this, we want to be a partner, we’ll assist you if you’ll be a partner on our campaign [for citywide accessibility]” (Holt-Shabazz 2014). In this way everyone is working towards greater community advancement, and incorporating bicycling into relevant wider community efforts.

These examples of relationship-building and community outreach also speak to a larger concept of human infrastructure, and the role of social networks in developing a stronger bicycle network. Adonia Lugo, the Social Equity Director for the League of American Bicyclists, has designed this term to highlight the underutilized resources and knowledge found in the cycling and immigrant communities in L.A. As she states,

People can be infrastructure; they create networks in which they hold places of meaning and value. Instead of reducing movement in the street to an individual engagement with physical transport infrastructure, the concept of human infrastructure emphasizes the role of social interaction in how people move. (2013a, 206)

Activating social networks between neighbors and coworkers to share relevant knowledge of routes and techniques for cycling could greatly reduce psychological barriers to cycling on the street, and make people feel more comfortable on a bicycle. Utilizing these networks could turn streets into a more accessible and inclusive urban space by empowering residents who have felt excluded by the historically polarized bike culture. Residents with shared cultural understandings and concerns are the best resources for their peers, and connecting outspoken community members with reluctant neighbors is an ideal chance to make the most of that insight.

Human infrastructure explains why the Minneapolis Bicycle Coalition's outreach strategy relies on reciprocal relationships with neighborhood organizations. Holt-Shabazz (2014) recognizes the ability of certain cultures to utilize social bridging to advance a cause more effectively than an outside advocate could hope to. In the case of the North Minneapolis Greenway, a few Hmong high school students were able to approach 20 families in their community that the City's traditional outreach process had yet to pick up on. Human infrastructure utilizes this type of networking to bring education to a community in a way that is culturally and socially relevant. This mode of thought emphasizes support for and development of neighborhood leaders, which empowers communities both now and moving forward.

III. Programming Solutions: Assigning a New Meaning Through Open Streets

The aforementioned strategies focus on how to advance greater equity in bicycling efforts when there is already an existing base of support to draw from. So how do advocates stir up support for bicycling if that foundation does not already exist? There is a certain

balance required between advocating for change and respecting community priorities in such cases. On one hand, bicycles are an affordable, reliable active transportation solution for increasing one's mobility in an environmentally sustainable manner. Subscribing to these beliefs, it is unfortunate that polarizing perceptions of bicycles and bicyclists prevent many residents from viewing these machines (and their advantages) as relevant to their lives. Yet telling communities that bicycling *should be* a priority for them is insensitive to other responsibilities and commitments they may hold.

I would argue that a balance is possible however, by providing residents with an opportunity to voluntarily test the waters around bicycling, and come to their own conclusions about the potential utility of bicycles in their personal situation. Such a suggestion focuses on changing perceptions and the culture around bicycle use through programming and education efforts, rather than a focus on physical infrastructure itself. As Adonia Lugo (2013b) states, much can be gained from viewing culture as “a kind of interface between the individual and the built environment. We're bringing a lot of stuff to how we use streets. So you can focus on design, but you shouldn't do it to the exclusion of all this other stuff that's going on.” Therefore through programming and events that acknowledge participants' diverse histories and encourage greater interaction with cycling, advocates can provide opportunities for residents to safely try out a relationship with the street, and decide for themselves how bicycling could improve their personal or community mobility.

Open Streets events are an increasingly popular tool used for this very purpose. Open Streets movements have evolved in the U.S. with the aim of widening the range of people who feel confident using a bicycle as a means of transportation. These events close urban roadways to automobile traffic in order to allow cyclists and pedestrians to take over the

street. Organizers encourage local businesses and organizations to set up activities along the route, resulting in a festive atmosphere for residents of all ages.

This concept originated over 30 years ago in Bogotá, Colombia in response to the suffocating environmental and health impacts of excessive automobile usage in the city. Without cars for a day residents could take to the streets and embrace a healthier way to move their bodies, free of the overwhelming pollution normally present (CicLAvia 2014). Starting with Portland (Oregon) and Chicago in 2008, these events have slowly spread throughout the United States and are now present in municipalities across the nation (Open Streets Project 2014). In the States, however, organizers have intentionally placed a greater emphasis on the social benefits of Open Streets programming rather than the environmental concerns on which the movement was founded. Here they frequently originate in areas grappling with racial or socio-economic tension, as a tool to increase community cohesion while promoting healthier transportation options.

Open Streets are a valuable programming strategy because they help a wide range of residents begin to feel comfortable on a bicycle. Sustainability Psychology explains how Open Streets help residents to overcome cognitive barriers which may prevent them from hopping on their bicycle to run errands or visit neighbors. Deci and Ryan's (2000) Self Determination Theory notes that individuals require competency, autonomy and a sense of relatedness to feel comfortable changing one's behavior (in this case to acknowledging the bicycle as a potential form of transportation). Open Streets are extremely effective at confronting these three barriers because they give hesitant potential cyclists a chance to try out a relationship with the street, alongside thousands of other inexperienced and experienced riders alike. According to Scott Cohen (2013) of the Portland Bureau of Transportation,

“maps are great, but there’s something so much better about the social experience” to empower hesitant cyclists. Open Streets allows residents to see the streets in a new way, and begin developing a stronger sense of belonging on a bicycle in this space (Spinney 2007).

Linda Ginenthal (2013) of the Portland Bureau of Transportation also stated the importance of keeping Sunday Parkways (Portland’s monthly Open Streets event) routes on neighborhood greenways, so that inexperienced riders could gain a familiarity with the streets that would have low auto traffic every day. She wanted to ensure that people felt competent and autonomous in the exact places where they could replicate their Sunday Parkways experience for commuting needs, rather than shutting down a major thoroughfare for the event, which people would be hesitant to traverse outside of the Sunday Parkways context.

In addition to the relevancy of routes, the frequency of Open Streets events greatly influences their effectiveness for behavior change purposes. If Sunday Parkways (for example) only occurred once a summer, it would be easy for participants to write off their actions that day as only possible in an Open Streets context. Yet with more frequent events it becomes easier for participants to normalize biking and walking as a transportation choice. Sunday Parkways occur five times every summer, and are repeated yearly. Such regularity makes the rides more of a habit-forming activity than the festival-like atmosphere of a one-time event, which can easily be discounted as a behavioral exception.

Open Streets additionally minimize divisive perceptions of bicycle use and encourage more diverse participation by involving community groups in the activities that line the event route. In Portland, Ginenthal has reached out to a number of community organizations typically underrepresented amongst cycling cohorts to partake in the festivities associated

with Sunday Parkways (Ginenthal 2013). She is asking groups such as the African American Health Coalition and the AARP to set up a table at stops along the route, or mobilize their members to volunteer and get out to see what opportunities cycling and walking present, anything to get more people involved. This type of participation is crucial in ensuring broad exposure to the fun, yet practical uses of bicycling.

Supporters of the North Minneapolis Greenway hope that an Open Streets event along their proposed routes will begin to foster a more positive attitude towards cycling infrastructure in hesitant community members. For those who may be resisting the greenway proposal because they are not invested in cycling, the upcoming Open Streets will hopefully give them an opportunity to find greater personal and community relevance in the bicycle. If all goes according to planned, any new greenway development will reflect a diverse range of community input, and create opportunities for previously cycling-averse residents to benefit from all the bicycle has to offer.

CONCLUSION

In the end, bicycle advocates have a responsibility to foster greater participation in both cycling as a form of transportation and the future development of bicycle infrastructure. The social dynamics currently plaguing our streets must not remain a dividing factor around who feels empowered to use them. Advocates, city government officials and residents alike have the power to redefine how we view bicycles in society. Lugo (2013b) conveys this potential for change well, stating

I certainly don't think that bike infrastructure in and of itself is something that will always cause X effect. It's the meanings that we give to it and the ways that we use it as a strategy that will cause these different effects; whether we want it to or not. We define these spaces with social and cultural values and stuff that we share, that doesn't necessarily emanate from the road.

Her comment highlights the power of social context in evoking reactions to infrastructure improvements. Moving forward with an additional focus on resident diversity and history of place, planners and bicycle advocates can utilize human infrastructure to ensure that all residents feel invested in results of bicycle planning initiatives. The cases of North Williams Avenue and the North Minneapolis Greenway reinforce the need for a more nuanced, neighborhood level approach to equitable bicycle planning moving forward. Paired with relevant and frequent programming events (such as Open Streets) to encourage greater participation in cycling, the bicycle can once again become an equitable tool for greater personal mobility.

RESOURCES

- Abbott, Carl, and Margery P. Abbott. 1991. "Abbott: A History of Metro, May 1991." Oregon Metro, prepared for the Metro Home Rule Charter Commission. <http://www.oregonmetro.gov/index.cfm/go/by.web/id=24270>.
- Andersen, Michael. 2013. "Census: Portland Biking Stalls for Fifth Year While Other Cities Climb." *BikePortland*, September 19. <http://bikeportland.org/2013/09/19/census-portland-biking-stalls-for-fifth-year-while-other-cities-climb-94248>.
- Ashmore, Kerry. 2011. "Ethnic Makeup Changed in North Minneapolis." *Twin Cities Daily Planet*, June 7. Accessed April 2, 2014. <http://www.tcdailyplanet.net/news/2011/06/07/ethnic-makeup-changed-north-minneapolis>.
- Ayer, Gray. 2012. "A Primer on Gentrification in Portland." Zine. Accessed June 24, 2013. <http://zinedistro.org/zines/128/a-primer-on-gentrification-in-portland/by/gray-ayer>.
- Bates, Lisa K. 2013. "Gentrification and Displacement Study: Implementing an Equitable Inclusive Development Strategy in the Context of Gentrification." Report commissioned by the City of Portland Bureau of Planning and Sustainability. May 18.
- Bicycle Transportation Alliance, 2013. "Our Work." Accessed January 27, 2014. <http://btaoregon.org/get-involved/>.
- Bonham, Jennifer, and Anne Wilson. 2010. "Bicycling and the Life Course: The Start-Stop-Start Experiences of Women Cycling." *International Journal of Sustainable Transportation* 6 (4): 195-213.
- Bower, Dan, Geller, Roger, Ginenthal, Linda, Igarta, Denver, Lear, Mark, and Jamie Waltz. 2009. "Portland's Platinum Bicycle Master Plan: Existing Conditions Report."
- Chin, Jacob, Hollingshead, Anissa, and Shanae Phillips. 2011. "Racial Disparities in Homeownership: A Report Prepared for the Minneapolis Urban League." May 17. <http://purl.umn.edu/107514>.
- CicLAvia. 2014. "About." Accessed May 2, 2014. Ciclavia.org/about.
- City Club of Portland. 2013. "No Turning Back: A City Club Report on Bicycle Transportation in Portland." <http://pdxcityclub.org/2013/Report/Portland-Bicycle-Transit/2013/Report/Case-Study-North-Williams-Avenue>.
- City of Minneapolis. 2011. "Bicycling Account: A Year-End Update on the State of Bicycling in Minneapolis." Report.

- City of Minneapolis, 2014a. "Bicycle Master Plan." Updated March 31, 2014.
<http://www.ci.minneapolis.mn.us/bicycles/projects/plan>.
- City of Minneapolis. 2014b. "Bicycling in Minneapolis." Updated April 28.
<http://www.ci.minneapolis.mn.us/bicycles/>.
- City of Minneapolis. 2014c. "North Minneapolis Greenway: Proposed Route and Designs." Updated March 19. <http://www.minneapolismn.gov/health/living/WCMS1P-122142>.
- Clark, Jay. 2014. "North Minneapolis Hmong Families Question Proposed Bikeway." *Twin Cities Daily Planet*, March 30. <http://www.tcdailyplanet.net/news/2014/03/30/north-minneapolis-hmong-families-question-proposed-bikeway>.
- Clean Air Partnership. 2009. "Bike Lanes, On-Street Parking and Business: A Study of Bloor Street in Toronto's Annex Neighbourhood." Accessed May 3, 2014.
www.cleanairpartnership.org/pdf/bike-lanes-parking.pdf.
- Cohen, Scott. 2013. Portland Bureau of Transportation. Personal interview. August 7.
- Deci, Edward L., and Richard M. Ryan. 2000. "Self-Determination Theory and the Facilitation of Intrinsic Motivation, Social Development, and Well-Being." *American Psychologist*, 55 (1): 68-78.
- Drennen, Emily. 2003. "Economic Effects of Traffic Calming on Urban Small Businesses." Department of Public Administration, San Francisco State University.
- Florida, Richard. 2002. *The Rise of the Creative Class*. New York: Basic Books.
- Florida, Richard. 2011 "America's Top Cities for Bike Commuting: Happier, Too." *The Atlantic*, June 22. Accessed January 16, 2014.
<http://www.theatlantic.com/national/archive/2011/06/americas-top-cities-for-bike-commuting-happier-too/240265>.
- Friedman, Steve. 2011. "#1 Bike City: Minneapolis." *Bicycling Magazine*, May 2011. Accessed January 22, 2014. <http://www.bicycling.com/news/featured-stories/1-bike-city-minneapolis>.
- Gallagher, Leigh. 2013. *The End of the Suburbs*. New York: Penguin Group.
- Garrett-Peltier, Heidi. 2011. "Pedestrian and Bicycle Infrastructure: A National Study of Employment Impacts." Political Economy Research Institute, University of Massachusetts, Amherst.

- Geller, Roger. 2009. "Tale of Three Cities." Slideshow.
www.portlandoregon.gov/transportation/article/268823.
- Gibson, Karen J. 2007. "Bleeding Albina: A History of Community Disinvestment, 1940-2000." *Transforming Anthropology* 15 (1): 3-25.
- Gibson, Timothy A. 2013. "The Rise and Fall of Adrian Fenty, Mayor-Triathlete: Cycling, Gentrification and Class Politics in Washington DC." *Leisure Studies*, doi: 10.1080/02614367.2013.855940.
- Ginenthal, Linda. 2013. Active Transportation Division of the Portland Bureau of Transportation in Portland, OR. Personal interview. August 5.
- Gordon-Larsen, Penny, Boone-Heinonen, Janne, Sidney, Steve, Sternfeld, Barbara, Jacobs, David R., and Cora E. Lewis. 2009. "Active Commuting and Cardiovascular Disease Risk: The CARDIA Study." *Archives of Internal Medicine* 169 (13): 1216-23. doi: 10.1001/archinternmed.2009.163.
- Gotschi, Thomas. 2011. "Costs and Benefits of Bicycling Investments in Portland, Oregon." *Journal of Physical Activity and Health* 8: 49-58.
- Greenfield, John. 2012. "Bike Facilities Don't Have to be the White Lanes of Gentrification." *Grid Chicago*, May 10. Accessed January 23, 2014.
<http://gridchicago.com/2012/bike-facilities-dont-have-to-be-the-white-lanes-of-gentrification/>.
- Hall, Stuart. 1996. "The Problem of Ideology: Marxism Without Guarantees." In *Stuart Hall: Critical Dialogues in Cultural Studies*, Ed. Kuan-Hsing Chen and David Morley, 25-46. London: Routledge.
- Hoffmann, Melody L. 2013. "Our Bikes in the Middle of the Street: Community-Building, Racism and Gentrification in Urban Bicycle Advocacy." Doctoral thesis, University of Minnesota.
- Holt-Shabazz, Malik. 2014. Minneapolis Bicycle Coalition. Personal interview. January 24.
- Holywell, Ryan. 2012. "Portland Struggles to Remain a Leader in Public Transit." *Governing* March. Accessed January 13, 2014. <http://www.governing.com/topics/transportation-infrastructure/gov-portland-oregon-struggles-to-remain-leader-in-public-transit.html>.
- Kransky, Gerik. 2013. Advocacy Director at the Bicycle Transportation Alliance in Portland, OR. Personal interview. July 29.
- Kretman Stewart, Sarah, Johnson, David C., and William P. Smith. 2011. "Bringing Bike Share to a Low-Income Community: Lessons Learned Through Community

- Engagement, Minneapolis, Minnesota.” *Preventing Chronic Disease* 10. doi: <http://dx.doi.org/10.5888/pcd10.120274>.
- Lansing, Jewel. 2005. *Portland: People, Politics and Power 1851-2001*. Corvallis, OR: Oregon State University Press.
- League of American Bicyclists and the Sierra Club. 2013. “The New Majority: Pedaling Towards Equity.” Report. <http://bikeleague.org/content/equity-reports-and-resources>.
- Lebetkin, Mark. 2013. “Top Urban Bike Paths Across the USA.” *TheActiveTimes.com* July 23. <http://www.usatoday.com/story/travel/destinations/2013/07/23/best-urban-bike-paths-across-the-usa/2576801/>.
- Lockwood, Ian, and Timothy Stillings. 2002. “Traffic Calming for Crime Reduction and Neighborhood Revitalization.” Report for the City of West Palm Beach, Transportation Division.
- Lubitow, Amy and Thaddeus R. Miller. 2013. “Contesting Sustainability: Bikes, Race, and Politics in Portlandia.” *Environmental Justice* 6 (4): 121-26.
- Lugo, Adonia. 2013a. “CicLavia and Human Infrastructure in Los Angeles: Ethnographic Experiments in Equitable Bike Planning.” *Journal of Transport Geography* 30: 202-07.
- Lugo, Adonia. 2013b. Personal interview. August 12.
- Mapes, Jeff. 2009. *Pedaling Revolution*. Corvallis, OR: Oregon State University Press.
- McGregor, Michael. 2003. “The Vanport Flood and Racial Change in Portland.” Oregon History Project. Accessed January 14, 2014. http://www.ohs.org/education/oregonhistory/learning_center/dspresource.cfm?resource_ID=000BC26B-EE5A-1E47-AE5A80B05272FE9F.
- Metropolitan Council. 2014a. “Thrive MSP 2040.” Accessed January 22, 2014. <http://www.metrocouncil.org/Planning/Projects/Thrive-2040.aspx>.
- Metropolitan Council. 2014b. “What We Do.” Accessed January 22, 2014. <http://www.metrocouncil.org/About-Us/Organization.aspx>.
- Midtown Greenway Coalition. 2014. “About the Greenway.” Accessed January 17, 2014. <http://midtowngreenway.org/about-the-greenway/>.
- Minnesota Compass. 2014. “Minneapolis-Saint Paul Neighborhoods.” Accessed April 2, 2014. <http://www.mncompass.org/twincities/neighborhoods>.

- Mirk, Sara. 2012. "It's Not About the Bikes." *Portland Mercury* February. Accessed January 14, 2014. <http://www.portlandmercury.com/portland/its-not-about-the-bikes/Content?oid=5619639>.
- Moudon, Anne Vernez, Lee, Chanam, Cheadle, Allen D., Collier, Cheza W., Johnson, Donna, Schmid, Thomas L., and Robert D. Weather. 2005. "Cycling and the Built Environment, a U.S. Perspective." *Transportation Research Part D: Transport and Environment* 10 (3): 245-61.
- Newman, Kathe and Elvin K. Wyly. 2006. "The Right to Stay Put, Revisited: Gentrification and Resistance to Displacement in New York City," *Urban Studies* 43 (1): 23-57.
- Nice Ride Minnesota. 2014. Accessed January 17, 2014. <http://www.niceridemn.org>.
- Open Streets Project. 2014. Accessed March 11, 2014. openstreetsproject.org.
- Oregonian Editorial Board. 2013. "Portland's Risky Bike-Share Venture." *The Oregonian*, December 13. Print.
- PeopleForBikes and Alliance for Biking and Walking. 2013. "Protected Bike Lanes Mean Business: How 21st Century Transportation Networks Help New Urban Economies Boom." Report.
- Peterson, David. 2013. "The Minneapolis Bicycle Story." Powerpoint. November 20. Accessed January 17, 2014. <http://www.slideshare.net/Trailnet/the-minneapolis-bicycle-story-david-peterson>.
- Portland Bureau of Transportation. 2008. "Portland Bikeway Network." Map. Obtained through personal correspondence.
- Pucher, John, Buehler, Ralph, Bassett, David R., and Andrew L. Dannenberg. 2010. "Walking and Cycling to Health: A Comparative Analysis of City, State, and International Data." *American Journal of Public Health* 100 (10): 1986-92.
- Roach, Sherifa. 2013. Owner/Operator of Blackbird Bicycle Repair in Portland, OR. Personal interview. August 2.
- Sheller, Mimi. 2011. "Sustainable Mobility and Mobility Justice: Towards a Twin Transition." In *Mobilities: New Perspectives on Transport and Society*, Ed. Margaret Grieco and John Urry, 289-304. Burlington, VT: Ashgate Publishing Company.
- Smith, Neil. 1979. "Toward a Theory of Gentrification a Back to the City Movement by Capital, Not People." *Journal of the American Planning Association* 45 (4): 538-48.

- Spinney, Justin. 2007. "Cycling the City: Non-place and the Sensory Construction of Meaning in a Mobile Practice." In *Cycling and Society*, Ed. Dave Horton, Paul Rosen and Peter Cox, 25-45. Burlington, VT: Ashgate.
- Stewart, Sarah. 2013. Minneapolis Department of Health and Family Support. Personal interview. December 10.
- Tanzman, Jason. 2013. Cycles for Change in Saint Paul, MN. Personal interview. October 30.
- US Department of Health and Human Services. 2002. "Physical Activity Fundamental To Preventing Disease." Report. Accessed May 3, 2014. <http://1.usa.gov/1bRYaKd>.
- Williams, Brandt. 2010. "North MPLS Cyclists Feel Left Out of Bike Sharing Program." *MPR News*, June 23. Accessed May 3, 2014. <http://www.mprnews.org/story/2010/06/23/north-mpls-bike-sharing>.
- Zimmerman, Jeffrey. 2008. "From Brew Town to Cool Town: Neoliberalism and the Creative City Development Strategy in Milwaukee." *Cities* 25: 230-42. Accessed April 1, 2014. doi:10.1016/j.cities.2008.04.006.