Queer Gender and Bicycling in Santa Cruz, CA

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by

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Certification of Approval

I certify that I have read Queer Gender and Bicycling in Santa Cruz, CA by Andy Murillo, and that in my opinion this work meets the criteria for approving a thesis submitted in partial fulfillment of the requirement for the degree Master of Arts in Geography at San Francisco State University.

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Abstract

Researchers in the geographic subfield of gender & mobility have considered the way gender and mobility shape each other within the lived experiences of women bicycle riders. The literature has neglected to explicitly consider the lived experiences of queer bicycle riders. To fill this gap, this thesis presents a qualitative case study examining the relationship between gender and mobility in the lived experiences of queer bicycle riders in Santa Cruz County, California.

This study collects data from adult queer bicycle riders who resided in Santa Cruz County using both an online survey and a semi-structured interview. The survey data was used to contextualize the beliefs and experiences of participants and discourse analysis was used to understand the themes present in our interview transcripts. This process resulted in an understanding of the participant's experiences occurring at two scales. First, at the scale of the body through queer and intersectional subjectivities and, second, at the local scale of infrastructure, both urban and rural.

The study theorizes a radical queer conception of 'cyclist-subjectivity,' by using a queer lens to understand the 'cyclist' as a normative mobile subject contrasted with the more general 'bicycle rider.' Cyclist-subjectivity is enacted through norms of gender, sexuality, race, and class; and through the bicycle community and its community spaces. The study analyzes bicycle space—the cyclescape—through a queer approach to space drawn from queer geography, considering the experiences of queerly-gendered mobile subjects at the infrastructural scale, as they move through Santa Cruz County. This presents the cyclescape as a site of normative gendered processes.

This study reframes thinking about the gender dynamics at play in bicycle communities, particularly regarding non-normative forms of gender outside of the cisgender heterosexual norm. Through centering non-normative queer voices, this study makes clear the subjects who are excluded from these communities. This clarity can then provide the basis for radical interventions into cycling to develop queer, or queer-inclusive, cycling communities. The study also provides an example of the way normativities operate within mobility spaces like the cyclescape, which can serve as a basis to evaluate the operation of normativities within mobility more broadly. In this sense, one can employ a queer geographic lens to further a larger goal of more just mobilities.

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Chapter 1: Introduction

Gender and mobility, like all factors of existence, occur in space. The interaction between gender and mobility described in the geographic literature on 'gender & mobility'[1] draws from both feminist and transportation geographies. The existing gender & mobility literature pertaining to bicycling has been well-developed to consider the gendered dynamics of women and men cyclists. It has not, however, thoroughly considered queer genders outside of that binary, nor has it explicitly considered queer subjects that fall outside of cisgenderness and heterosexuality.[2]

Queer subjects warrant specific attention in that they inhabit and move through space in particular ways. Space functions as a terrain of normativities, in which the regulation and discipline of subjects occur, including in terms of gender. Queer subjects—those "at odds with straight culture" in the words of queer theorist Michael Warner (1999)—run up against the gender-normative function of space most acutely (p. 38). In this study I seek to understand the ways that gender and mobility interact in the lived experiences of queer bicycle riders in Santa Cruz County, CA. In so doing, I aim to contribute to the literature of gender & mobility by developing a fuller understanding of gender, mobility, and the interactions between the two, through this case study.

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[1] Throughout I use 'gender & mobility,' with an ampersand, to distinguish the literature or subfield and 'gender and mobility,' spelled out, to distinguish the individual concepts being approached as a pair.

[2] For more on implicit heterosexuality, see Judith Butler's discussion of compulsory and naturalized heterosexuality in chapter 1 of *Gender Trouble* (1990). For implicit cisgenderness, see Judith Butler's discussion of the unintelligibility of non-normatively gendered/sexed bodies in *Bodies that Matter* (1993).

In this chapter, I begin by defining the focus and scope of the study, in terms of study population, site, and research questions. I discuss my study population first as non-normative queers and then as bicycle riders. Then, I discuss my own positionality as a researcher and motivation for undertaking this study. Finally, I provide an overview of the structure of the thesis as a whole.

Focus and Scope

Non-normative Queers

For this study, I chose the term 'queer' as the most concise way of describing the general population that I was looking to sample. Like Michael Warner (1999), I use the term "in a deliberately capacious way… in order to suggest how many ways people can find themselves at odds with straight culture" (p. 38). I recognize the challenge of labeling, as some individuals within the 'LGBT community' do not identify with the term 'queer;' yet, it still seemed appropriate to simply use 'queer' to define my study population against a cisgender heterosexual population. I was open to including LGBT individuals who did not identify as queer if they sought me out, but all my participants identified as queer.

To make the study population clearer, I chose to include the terms 'radical'[3] and 'non-normative' as examples of the political orientation I was seeking. Radical or non-normative queers generally hold political interests beyond representative politics, encompassing critiques of normative structures including, for example, heteronormativity but also class and whiteness.[4] I

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[3] I draw from the idea of radical as meaning "to grasp the root of the matter," to address the underlying cause of a political issue. (Marx, 1844).

[4] For an example of a radical queer collective, see Against Equality (Conrad, 2014). Queer critiques of normative structures will be more fully addressed in the following chapter, my literature review.

hoped that the inclusion of these terms would help attract participants with a deeper sense of queer bicycle politics, for instance beyond LGBT inclusion in bicycle nonprofits. This was driven by a curiosity about the intersection of non-normative gender and non-normative mobility politics.

Bicycle Riders

I chose to study bicycle riders[5] as an opportunity to theorize bicycle riding as a sort of non-normative mobility, positioned against automobility as a normative mobility regime. There are, of course, bicycle riders across the political and normative spectrum, so a combined study of non-normative queer bicycle riders felt like a natural way to approach the topic of cycling as non-normative mobility. The divide between normative and non-normative bicycle riders will be discussed later in participants' own words.

Through the course of my study, a distinction arose between the terms 'bicycle rider' and 'cyclist.' I initially used the terms somewhat interchangeably: I featured the term 'cyclist' in large print on my original flyer and 'bicycle rider' in smaller print. I would use either term when speaking to others about my project.[6] Potential participants helped me realize that 'bicycle rider' should be the more general, preferred, and inclusive term. I address the change to focusing on the term 'bicycle rider' more fully in the Methods chapter of this thesis. I also explore the distinction between the two, in the words of my participants, in the first discussion chapter, Cyclists & Their Others.

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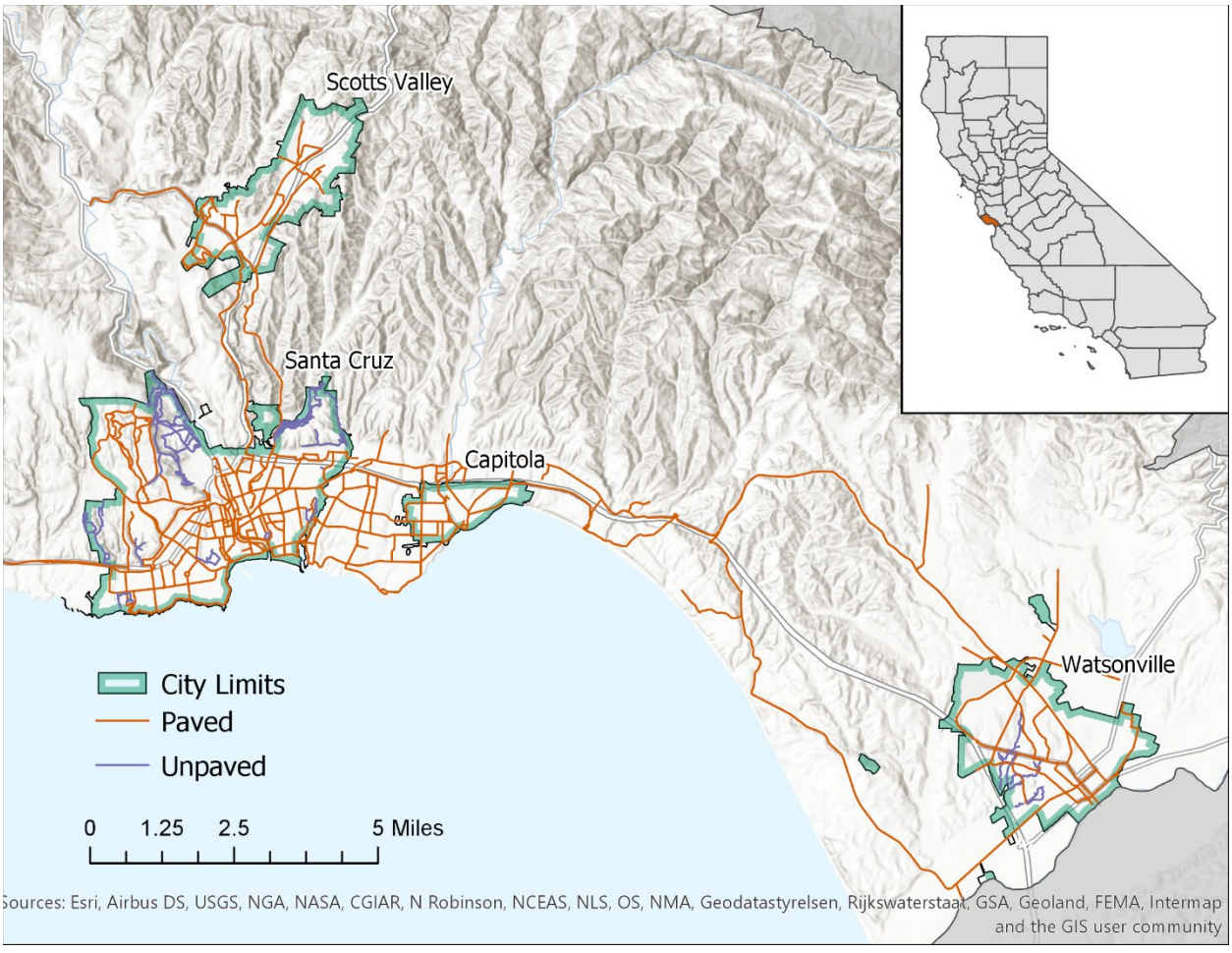
[5] I also included adult tricycle riders in my inclusion criteria, although I did not find any tricycle-riding potential participants.

[6] In addition to also using 'biker,' which was quickly corrected by a motorcycle-riding fellow grad student. Thank you, Linda!

Santa Cruz County, CA

This study focuses on the queer bicycle riders of Santa Cruz County, CA. The county is situated along the Central Coast of California, making up the northern half of the Monterey Bay (Map 1). In 2020, the population was 270,861 people (U.S. Census Bureau, 2023). For the years 2015-2019, 2.7% of county-wide commuters traveled by bicycle, the fifth highest rate of any county in California (U.S. Census Bureau, 2020a).

Map 1. Santa Cruz County, its Cities, and its Bicycle Infrastructure



Map 1. The four cities in Santa Cruz Count (outlined in green), with bicycle infrastructure in orange. Inset map shows the location of Santa Cruz County within the State of California. Prepared by author.

The City of Santa Cruz is the county seat. In 2020, the population of the city was 62,956 people (U.S. Census Bureau, 2023). For the years 2015-2019, 7% of city-wide commuters traveled to work by bicycle (U.S. Census Bureau, 2020b). Santa Cruz is known for a history of countercultural movements and politics, including environmental and queer politics.[7]

Santa Cruz County is home to 227 miles of bicycle infrastructure, as of 2020, including 200 miles of bicycle lanes and 27 miles of bicycle paths. The City of Santa Cruz itself accounts for 60.37 miles of this infrastructure, with 49.5 miles of lanes and nearly 11 miles of paths. The other three cities in the county account for nearly another third of the total: Watsonville has 29.25 miles of infrastructure (19.71 miles of lanes), Scotts Valley has 18.31 miles (17 miles of lanes), and Capitola has 15.21 miles (15 miles of lanes). The remaining 100 miles of bicycle infrastructure are in the unincorporated county, with 96.5 miles of bike lanes and 3.7 miles of bicycle paths (SCCRTC 2021). The other cities in Santa Cruz County have low rates of bicycle commuting. In Watsonville, 1% of commuters traveled by bicycle. In Capitola the rate was only 0.4% and in Scotts Valley only 0.2% (U.S. Census Bureau, 2020b).

The population of Santa Cruz County is primarily white (56.2%) or Latino (34.4%), but the racial and ethnic distribution is uneven at the scale of the city (table 1; U.S. Census Bureau, 2023). Most notably, Santa Cruz, Capitola, and Scotts Valley contain larger white and Asian populations compared to Watsonville. In turn, Watsonville is vastly more Latino (84.3%) than

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[7] Much of the history of counterculture in Santa Cruz has been written in newspaper articles, rather than in academic sources. On environmental counterculture, see for example Robinson's (1986) coverage of the far-left organization, Earth First!, and Seals' (2005) retrospective on the authors of a landmark 1970 report, "Santa Cruz and the Environment." On queer counterculture, there is a lesbian example from Cone (1993). For right-wing backlash against counterculture in Santa Cruz more generally, see Marks (1982) and Hoppin (2013).

the County and the other three cities. In Santa Cruz County, Latino individuals are often associated with lower-class manual labor, due to the history of Watsonville as an agricultural community.

Table 1. Race and Ethnicity in Santa Cruz County and its Cities

Race and Ethnicity	Santa Cruz County, California	Santa Cruz (city), California	Watsonville, California	Scotts Valley, California	Capitola, California
American Indian / Alaska Native	1.9%	0.9%	0.8%	0.5%	0.6%
Asian	5.3%	10.7%	2.9%	5.8%	6.3%
Black / African American	1.5%	2.2%	1.3%	0.4%	0.2%
Hispanic / Latino	34.4%	21.1%	84.3%	12.1%	23.3%
Pacific Islander	0.2%	0.1%	0.2%	0.0%	0.3%
White (not Hispanic / Latino)	56.2%	60.8%	11.9%	77.7%	66.0%
Two or More Races	4.4%	9.9%	10.7%	6.7%	6.4%

Table 1. Race and ethnicity of the populations of the County of Santa Cruz and its four cities (in order of population): Santa Cruz, Watsonville, Scotts Valley, and Capitola. Data Source: U.S. Census Bureau, 2023.

Research Direction

This study addresses the following research questions pertaining to queer bicycle riders in Santa Cruz County. First and foremost, "How do gender and mobility co-produce each other in the lived experiences of radical queer bicycle riders in Santa Cruz, CA?" This question directly follows from the gap posed in my research problem noted above: the lack of studies that explicitly address queer subjects in the gender & mobility literature. I approach gender and mobility as two forms of subjectivity—categories that give an individual and their lived experiences meaning within a wider social and spatial context. Gendered, mobile subjects are produced through material and discursive expressions of power. In so doing, I also approach gender and mobility as interrelated, necessarily co-productive of each other. Through this study, I aim to investigate this co-production, analyzing the ways gendered and mobile subjectivity shape each other in the lives of my participants. Gendered and mobile subjectivity, and their co-production, will be covered in depth in the following chapter, through the works of the queer theorist Judith Butler and critical mobilities scholar Mimi Sheller.

From this primary research question, two sub-questions arise. The first sub-question asks, "How do other forms of subjectivity (e.g. race & class) differentiate or complicate these gendered and mobile experiences?" In asking this question, I seek to develop a fuller understanding of gender and mobility as subject positions that are multiply determined, not just by each other, but also by subjectivities like race and class. As will be discussed in the next chapter, approaching gender and mobility from a perspective that accounts for supplementary subject positions is important for improving the quality of studies in the gender & mobility literature.

The second sub-question asks, “In what ways do mobility spaces (e.g. the built environment of streets and mixed-use paths, or the natural environment of trails) shape queer experiences of cycling in Santa Cruz?” In asking this question I seek to place the participant’s lived experiences within their spatial context, by addressing the phenomenon as it relates to the “cyclescape,” or the material and discursive space of the bicycle (Stehlin, 2019). In so doing, I connect their experiences between the scale of the body (at which subjectivity is often considered) and the local scale of infrastructure. This study uses qualitative data and analysis to answer these three questions, through which I aim to develop a fuller understanding of gender, mobility, and the interactions between the two, contextualized by subject position and geography.

I began this thesis research with a more exploratory intention directed toward understanding the relationship between gender and mobility for queer subjects, rather than having formal hypotheses. That said, I did have preconceived ideas about the general directions my research might take. Based on previous studies within gender & mobility, I imagined that safety and risk would feature prominently in the lives of queer bicycle riders but was not sure how this would impact the beliefs and behaviors of my participants. For instance, I wasn’t sure if my participants would demonstrate the sort of risk aversion found among women bicycle riders in other studies (Ravensbergen, 2019; Heim LaFrombois, 2019) or if the risk of cycling would be treated as another site for resistance against normative culture in a world hostile to queer folks.

I imagined that race and class would in some sense affect gendered and mobile experiences. This belief was informed by an ontological commitment to queerness as an assemblage of subjectivities that are interwoven and cannot be separated out, similar to but

beyond the idea of 'intersectionality' (Puar, 2017). I did not make guesses about specifically how the interaction between queer gender, sexuality, race, and class would play out, although I am aware that racialized and lower-class bicycle riders can be rendered as 'invisible' within mobility and, specifically, bicycle politics (Hoffman, 2016, pp. 15-18).

I had the clearest vision for the role I thought infrastructure would play. Infrastructure as mobility space provides a site for the most immediate encounter—or often conflict—between various forms of road user, including pedestrians, bicycle riders, transit riders, and motorists (see for instance Henderson, 2013). As a site of encounter, mobility infrastructure provides an atmosphere in which affects can circulate—pre-individual, precognitive, embodied feelings that move between bodies, technologies, and environments (on the affective atmospheres of mobility spaces, see Kusters, 2019; on affective economies more generally, see Ahmed, 2004). I predicted that this affective quality of infrastructure would constitute a recurring theme in participant experiences, whether in the form of pleasure, rage, or fear. This prediction was borne out of my personal, lived experience, as a radical queer bicycle rider.

Positionality and Motivation

In this section I describe both my positionality and my motivation for undertaking this study. This practice of explicating these personal factors of the researcher draws from the qualitative (particularly feminist) tradition of reflexive writing and examination of the 'researcher-subject.' In doing so, the researcher provides context to their relationship to the study and foregrounds sources of bias. This is necessary because the knowledge production process is not only shaped by the subject positions of the participants, but the positionality of the researcher as well.

Many aspects of my positionality are similar to the participants that I was able to recruit for the study. I am a non-normative, 'radical' queer person; a bicycle rider who accepts but does not use the term cyclist (this ambivalent acceptance is covered in the Findings & Discussion chapter); and I lived in Santa Cruz for 23 years. Santa Cruz is where I learned to ride a bike, where I came out as queer, and where I developed my anarchist[8] analytical lens.

Other subject positions relevant to this study include that I am a working-class person, I am Chican@[9], and I am a student as well as a researcher. My class and racialization allowed for an attunement to the "view from below," in the words of Donna Haraway (1988)—I am better positioned to understand the normative dimensions of gender and cycling concretely, rather than in the abstract sense of solidarity with queer, working-class, people of color. My position as a student-researcher may have also benefited me in the research process. Four out of six of my participants expressed some connection the University of California—Santa Cruz (UCSC), whether as a student, faculty member, or alum. One participant, not affiliated with UCSC, is a teacher at a lower grade level. My participants' involvement with education may have allowed for a greater acceptance of me as a student-researcher.

My motivation to conduct this study, with this particular site and population, was drawn from this assemblage of subjectivities. For one, I was interested in researching subjects similar to myself, while also exploring what I imagined to be the diverse thought of queer bicycle riders.

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[8] Anarchism refers to an ideology that seeks to abolish hierarchy, including class, nation states, white supremacy, colonialism, and cisheteropatriarchy. For examples of anarchism as it intersects with queer politics, see *Queering Anarchism* (Daring, Rogue, Shannon, & Volcano, 2012). For an example of anarchism as it intersects with geography, see the work of Simon Springer.

[9] The suffix -@ is used to gender-neutralize the Spanish suffixes -o or -a. It represents a combination of the two letters.

Because of the limitations of the gender & mobility literature regarding cycling, I was keen to expand the literature to include 'us.' In doing so, I also hoped to develop a project through which I could critique the normative structures surrounding (or composing) gender and mobility.

Chapter Overview

In the next chapter, I provide a synthesis of several literatures: gender & mobility as it pertains to cycling, gender and mobile ontology as it pertains to the production of gendered and mobile subjects, and queer theory beyond gender and sexuality. These literatures are used to theoretically ground and provide context to the analysis conducted in this study. In chapter 3, I describe the queer-geographic methodology through which I designed this study and explain the methods that follow from this methodology in detail. This covers the processes for sampling participants, conducting surveys and interviews, and coding and analyzing the qualitative data collected from participants.

In chapters 4 and 5, I present and discuss the findings of the study. The first discussion chapter covers the role that subjectivity plays in the lived experiences of queer bicycle riders in Santa Cruz County. I consider the ways norms of gender, race, and class work together with mobility to produce gendered mobile subjects. This examination of subjectivity allows theorization of a sense of 'cyclist-subjectivity' as a normative subject position. Further, I discuss the ways these normative processes take place at the level of the bicycle community, and particularly within community spaces like bike shops and repair spaces.

The second discussion chapter describes the way this subjectivity becomes enacted in bicycle space, or the 'cyclescape' (Stehlin, 2019). Using a queer approach to space drawn from queer geography, I analyze the cyclescape as a space in which normativities operate, shaping the

experiences of participants. This phenomenon occurs primarily through interactions with other road users (other bicycle riders, motorists) and with infrastructures, both urban and rural. In the final chapter, I summarize my conclusions from the study, consider the implications of the work, and provide future directions for research.

Chapter 2: Literature Review

This thesis is informed by the theoretical approaches of existing studies within the 'gender & mobility' literature focused on bicycling and applies these approaches to queer mobilities. This chapter will survey both the gender & mobility literature as well as texts drawn from queer theory and critical mobility studies to support the research undertaken in this thesis.

I begin this chapter by introducing the reflexive critiques from scholars within the gender & mobility subfield of geography, which have suggested an insufficient synthesis of the two concepts within the subfield. This oversight is often attributed to a limited understanding of gender within these studies (Hanson, 2010; Ravensbergen et al., 2019). These critiques—particularly a critical framework developed by feminist transportation geographer Susan Hanson—form an inspiration and basis for this study. While surveying academic databases I found studies drawing on Hanson that approached queer mobilities outside of bicycling, for example a study on trans bus riders by Lubitow et al. (2017) and on fat queer hikers of color by Phiona Stanley (2019). I aim to expand the gender & mobility literature to include queer cycling specifically.

Next, I argue that the depth necessary for proper synthesis of gender and mobility can be achieved by turning to ontology—roughly the study of being and existence, or how 'things' (like gender and subjects) exist.[10] Ontology is useful as a means to examine the concepts underlying the complex lives and experiences of diverse subjects including, in this instance, queer bicycle

[10] Or, perhaps I should say, turning to ontology *more consciously*, since even the insufficient synthesis identified by gender & mobility scholars relies on a certain ontology, as will be discussed below.

riders. The gender ontology put forward here is drawn from queer theory, a post-structuralist framework which interrogates the way regulatory norms, or 'normativities,' produce subjectivity, such as gender. The mobile ontology here is drawn from critical mobility studies, an interdisciplinary approach that aims to understand power through differential (im)mobility, including the production of subjectivity, and to use this understanding to interrogate mobility injustices.

To supplement this ontological focus, queer geography is introduced to provide a framework for spatializing the gendered and mobile experiences of queer cyclists. Queer geography is a diverse field of study that applies queer theoretical insights about normativities to a study of space. Queer geography looks at the way space, subjects, and normativities shape and are shaped by each other. This framework, combined with insights from gender and mobile ontologies, offers a means to explore the experiences of radical queer bicycle riders in Santa Cruz and address the main research question of this study: How do gender and mobility shape each other in the lived experiences of radical queer bicycle riders in Santa Cruz, CA?

Finally, I incorporate insights from queer theory beyond gender and sexuality, to provide a theoretically grounded understanding of norms of class and racialization, and how they interact with queer subjectivity. This addresses the sub-question of this study: How do other forms of subjectivity (e.g., race & class) differentiate or complicate their lived experiences?

Introducing the Gender & Mobility Literature

Since the 1970s, researchers in the geographic subfield of gender & mobility have sought to understand the way women move through public space (Law, 1999; Hanson, 2010; Ravensbergen et al., 2019). Throughout that time, geographic researchers within gender &

mobility have leveled self-critiques regarding the simplistic ways that either gender or mobility have been evaluated. More recent critiques have focused on the limited synthesis between the concepts gender and mobility within this literature. In these critiques, gender & mobility researchers have drawn on the framework Susan Hanson (2010) proposed in her article, "Gender and Mobility: New Approaches for Informing Sustainability."

In her review, Hanson identifies two separated areas of research in gender & mobility studies, which she refers to as "strands": one centered on the ways mobility shapes gender and the other on the ways gender shapes mobility (table 2). The first strand considers the specificities of gender (as well as race and class) and related unequal power relations[11] but relies on a simplified binary when it considers mobility, split between liberatory mobility and oppressive immobility. Hanson describes this binary as a "familiar dualism" that focuses primarily on spatial containment as a source of women's oppression and increased access to public life as their liberation. She contends that this approach to gender and mobility neglects the possibility of examining the benefits of rootedness or the detriments of forced mobility (pp. 9-11). The second strand considers specificities of mobility patterns while relying on a simplified male/female binary.[12] Hanson suggests that this limited understanding of gender is tied to quantitative methodologies, where a male/female checkbox provides efficiency to data collection. These methods have been used, for instance, in national journey-to-work datasets or metropolitan travel

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[11] In Hanson's analysis, drawing on Scott 1986, these unequal power relations are between women and men.
[12] With regard to this gender binary, Hanson is referring to two monolithic conceptions of maleness and femaleness derived from an essentialist understanding of gender and sex, rather than an exclusion of non-binary individuals (as in the 'spectrum model' of gender). In this sense, Hanson's critique is incomplete, presenting an opportunity for expansion through the incorporation of queer theories of gender.

diaries (pp. 11-12). This limitation means that gender is only collected on a superficial level, rather than getting to the heart of what gender means in the context of the mobile subject's life. In this approach to gender, womanhood becomes disconnected from the specific intersection of a woman's identities and from her unique lived experiences.

Table 2. Hanson's Gender & Mobility Framework

Strand	Mobility → Gender	Gender → Mobility
Focus	Detailed gender, generalized mobility	Detailed mobility, generalized gender
Limitation	Mobility = good Immobility = bad	Gender as a checkbox, non-specific male/female
Methodology	Qualitative	Quantitative

Table 2. Hanson's (2010) framework for assessing strands within gender & mobility literature. Prepared by author.

Hanson argues that because the two strands have remained separated, there is an insufficient theorization of the interaction between complex gendered and mobile processes. To overcome this gap, research needs to integrate in-depth understandings of both gender and mobility. The key to this combination, Hanson suggests, is a focus on context-specific studies which view "the individual as embedded in household, neighborhood, region and larger society" (p. 13). As more contextual factors are specified, there is a greater ability to synthesize findings and transfer them at depth between similar cases. For gender & mobility, this means looking at the ways that mobility shapes and is shaped by the gender of individual women at the

intersections of their various subjectivities (e.g., gender, sexuality, race, class, age, ability, and so on). For this thesis, Hanson's ideas can also be applied to the gender of specific queer individuals and other gender variant folks.

Drawing on Hanson (2010), the geographers Léa Ravensbergen, Ron Buliung, and Nicole Laliberté (2019) provide a useful update on the state of the gender & mobility literature focused on cycling at the end of the 2010s. Their meta-analysis of journal articles in English-language journals reveals that the second trend which Hanson identified in her research, gender as it influences mobility, has been well covered. The studies using this approach are concerned primarily with the 'gender gap' in cycling, i.e. the relative lack of women cyclists when compared to male cyclists, for both transportation and recreation, at least in English-speaking countries.

Ravensbergen et al. find that most of the scholarly work concerning the way gender influences mobility focuses on one of two themes: risk (or perceived risk) as it inhibits cycling and the gendered division of domestic labor as it informs trip characteristics for everyday tasks outside of the home (p. 4). Drawing on the geographer Robin Law's (1999) critique of the state of geographies of gender & mobility in her own day, Ravensbergen et al. (2019) argue that while gendered patterns have been identified by the studies in their review, "the underlying gendered processes that may produce observed outcomes such as risk-aversion or trip-chain travel characteristics[13] in the first place are not adequately or deeply considered" (p. 6). In other words, what is not asked about is the link between such behaviors and gender. For instance, why have

[13] Trip-chaining refers to the organization of tasks outside of the home into one trip, traveling from point A, to B, to C, and so on.

women been socialized to be more risk-averse? And why is the division of labor such that women are in charge of more tasks that require trip-chaining? Thus, Hanson's argument holds true, as studies concerned with the way gender shapes mobility still lack an in-depth understanding of the workings of power and gender itself.

Ravensbergen et al. (2019) argue that the first strand, which emphasizes the way in which mobility influences gender, has been insufficiently researched since Hanson's review was published. They maintain that research that continues to utilize this simplified sense of gender is "problematic because it can result in studies that ignore the power relations that exist between these social categories" (p. 6). By extension, this simplification generates studies that also fail to consider the way power produces or shapes gender. Ravensbergen et al. (2019) reiterate Hanson's call for contextualized research, but now suggest a focus on how mobility influences gender to complement the well-documented second strand, how gender influences mobility (p. 6). In order to respond to Hanson's (and now Ravensbergen's) call, I turn to ontologies of gender and mobility to provide a framework for digging deeper into these concepts as the methodological and theoretical bases of this literature.

The Co-Production of Gender and Mobility

A discussion of the production of gendered and mobile subjectivities must begin with the concept of performativity, particularly in the way this concept has been elaborated upon by the philosopher and gender theorist Judith Butler (1999 [1990]; 2011 [1993]) and the sociologist and critical mobilities scholar Mimi Sheller (2018).

The concept of performativity is at the heart of Butler's gender ontology, their philosophical project that aims to uncover what gender is, how it is enacted individually and

socially, and how it regulates and constrains subjects and bodies. In *Bodies that Matter*, Butler (2011) describes the broader idea of performativity as a "reiterative and citational practice" responsible for the production of subjects (p. xii). Performativity is central to ontological status—the status of being or existing. This status is imparted via performativity to subjects through repeated reference to regulatory norms in speech as well as behavior. They elaborate that rather than innately 'having' a gender or even 'being' a gender, gendered subjects are produced through regulatory norms. Further, Butler notes that even subjects who resist these norms are still produced by them, in what they term the "paradox of subjectivation" (p. xxiii). That is to say, even queer subjects who resist heteronormativity or binary gender are still produced as subjects through gender and sexual norms.

Regulatory norms also produce the materiality of the body, attaching significance to mere flesh. Butler (2011) writes, "What constitutes the fixity of the body, its contours, its movements, will be fully material, but materiality will be rethought as the effect of power" (p. xii). In other words, subjects, bodies, and mobilities are produced by power in part through gender as a regulatory matrix. "The 'I' [the subject] neither precedes nor follows the process of this gendering, but emerges only within and as the matrix of gender relations themselves" (p. xvi; see also Butler, 1999, p. 22). Subjects only exist, then, insofar as they are actively being gendered, racialized, classed, etc. Subjects as such do not exist before this process, and the process is constantly reiterated.

Mimi Sheller (2018), in turn, argues that mobility is also performative (p. 10). In the same manner as the production of gendered and sexed subjects, mobile subjects are also produced through reiterative citation of regimes of mobility. Sheller defines regimes of mobility

as normative structures that "govern who and what can move (or stay put), when, where, how, under what conditions, and with what meanings" (p. 11). This sense of performativity is a key component of Sheller's mobile ontology, in which "movement is primary as a foundational condition of being, space, subjects, and power*"* (emphasis removed, pp. 9-10). Sheller explains that mobile subjects are produced through differential mobility: "our capacities for movement shape our bodily experiences and identities within normative social orders and hegemonic mobility regimes" (Sheller, 2018, p. 45). That is to say, subjects are produced through their constrained mobilities relative to the mobile ideal—an autonomous and hyper-mobile subject, often white, cisgender, heterosexual, able-bodied, and male. These constrained subjects include gendered and sexualized subjects, disabled subjects, and Black subjects (pp. 48-64). Each is produced by the way they move (or don't, or can't move) through space, in contrast with the ideal, unconstrained, mobile subject.

According to Sheller, power itself is produced through differential mobility; however, this claim runs up against Butler's argument that the body's movements are themselves "an effect of power" (2011, p. xii). Together, both Sheller and Butler's ideas on power and performativity provide a framework that helps to better understand the way gender and mobility interact. This framework helps to clarify how seemingly contradictory ontological processes work in concert and co-produce each other. The matrix of gender and regimes of mobility work in tandem to produce gendered and mobile subjects.

In reference to cycling specifically, we can consider performativity and regulatory norms in the way that the constraints of (im)mobility shape or produce gender in cycling subjects, à la Sheller's ontology. This shaped/produced gender would not be simply maleness or femaleness,

but gender in its specificity as Hanson recommends, contextualized by the norms in place in the cyclist's geographic context and the norms governing other forms of subjectivity. We can additionally consider the way that constraints of normativities (gendered normativity and beyond) shape or produce the cycling subject itself, for example through the particularities of the queer experience moving through space, as is to be explored through this project. For example, one theme commonly discussed in the gender & mobility literature focused on women, and which may be instructive for a study considering queer cyclists, is the regulatory function of risk while moving through space and how it is productive of both gender and mobility.

The Co-Production of Gender and Mobility in Space

The co-production of gender and mobility occurs through a spatialized field of power. We can see this productive process in the gender & mobility literature in the way that risk is shown to constrain gendered subjects' capacity to move through space. For instance, Ravensbergen et al. (2019) identify risk as the most commonly identified factor contributing to a gender gap in cycling between women and men in English-language journal articles. Thirty-six out of the sixty-one articles included in their meta-analysis discussed what Ravensbergen et al. refer to as the "risk-aversion" hypothesis (p. 4). This common hypothesis suggests that the gender gap can at least partly be attributed to women's perception of cycling as more hazardous than other modes of travel through public space or not traveling at all. From their survey of the literature, Ravensbergen et al. have identified a number of reasons for risk-aversion, from infrastructure quality to personal safety, but have not found that the literature offers explanations for why risk-averse behavior would be gendered in the first place (pp. 5-6).

The urban planner Megan Heim LaFrombois (2019) has similar findings from her research on gender & bicycling. She identifies risk-aversion as a primary factor but, in contrast to the articles surveyed by Ravensbergen et al., Heim LaFrombois works to better understand the gendered processes behind those risk-averse practices. Using surveys and interviews with female cyclists from the Chicago cycling community (and contrasted against data collected from their male counterparts), she found that safety and threat of harassment were key barriers that prevent women from cycling or that otherwise constrain their mobility (p. 9). Heim LaFrombois writes that "women cyclist interviewees, in particular, understood their use of and regulation within public space as being bound, or constrained by, street harassment and safety concerns" (p. 11). Risk in this sense serves as a regulatory function of public space and, by extension, mobility within and through that public space. Via cycling as a mobility practice, Heim LaFrombois considers the way gender is shaped by movements through space. This process takes place both through ideas of "performing masculinities"—e.g. bulking up or "develop[ing] a pair"[14]—and through challenging the way mobility and cycling are gendered in the particular geographic context of Chicago (p. 10). Her interview data demonstrates the broader argument that "space embodies social relations of power," including gendered relations (p. 11). In this way, power and gender can be more fully understood through space as a medium.

Power and Space in Queer Geography

This idea of space as a medium for relations of power is consistent with the trajectory of queer geographers' understanding of space. Initially, queer geography aimed to understand

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[14] "Developing a pair," or often "growing a pair," is an idiom equating courage with masculinity via reference to testicles.

'queer space,' or "spaces of gays and lesbians or queers existing in opposition to and as transgressions of heterosexual space" (Oswin, 2008, p. 89). Since the mid-2000s, queer geography has incorporated post-structuralist critiques concerning the impossibility of spaces outside of regulatory norms, e.g. spaces outside of heteronormative gender and sexuality. Rather than approaching space as either essentially heteronormative or queer, more recent queer geographers (particularly those strongly invested in post-structuralist critique) advocate a 'queer approach' to space instead of this idea of 'queer space' itself (Oswin, 2008). As such they suggest analyzing the way normativities operate in space more generally, including (perhaps especially) in spaces that claim to be anti-normative. In these so-called 'queer spaces,' they argue, we can find spaces that are "unfixed, contested and disciplinary," in the sense that they too are complicit with and reproduce regulatory norms (Nash paraphrased in Oswin, 2008, p. 91).

Queer geography and the queer approach to space can help further understand the ways gender and mobility are produced through the reiterative citation of norms, as laid out by theorists like Butler and Sheller, by showing a terrain on which these embodied processes take place. In addition to applying this lens to the idea of queer space, it can also be extended to bicycle space, or the 'cyclescape,' in bicycle geographer John Stehlin's terminology (2019). In these spaces, we can analyze how the norms of mobility regimes are enacted and produce mobile (and gendered) subjects. As we analyze the norms operating in these spaces, we can also turn attention to norms beyond gender and sexuality, particularly considering class and race, in order to better contextualize the experiences of queer subjects as they move through space.

The Queer Mobile Subject beyond Gender & Sexuality

A significant component of Hanson's (2010) framework for gender & mobility studies is the central role played by the context of the subject's everyday life in deepening our understanding of both gender and mobility. For example, Hanson argues, through her research in Worcester, MA, that class positioning and spatial organization are critical to understanding women's mobility in the specific context of Worcester (p. 18). Although Hanson does not discuss race herself, she also points to studies that incorporate racial subjectivity into their research—for instance, the geographer Melissa Gilbert's (1998) study of African American women in Worcester and the benefits of "spatial boundedness" rather than the usual formulation of "spatial entrapment." As with the case of women, class and race are significant for understanding the queer subject as well.

Within queer politics, class can be discussed in terms of homonormativity. The gender and sexuality studies scholar Lisa Duggan (2003) describes homonormativity as:

> neoliberal sexual politics… a politics that does not contest dominant heteronormative assumptions and institutions, but upholds and sustains them, while promising the possibility of a [politically] demobilized gay constituency and a privatized, depoliticized gay culture anchored in domesticity and consumption. (p. 50)

This concept is used in queer geography (e.g. Oswin, 2008) as a way to describe how the meanings of sexuality and gender[15] are influenced by class position and political-economy, particularly under neoliberalism. By depoliticizing queers into a new consumer category, neoliberalism produces 'good' homonormative LGBT subjects, primed to assimilate into dominant culture and uphold normative order, including spatial organization and mobilities. These subjects are then counter-posed with 'bad' non-normative queer subjects, particularly poor, homeless, and/or working-class queers who represent a threat to normative order and must be either disciplined or removed from public space.

Within cycling, we can consider this phenomenon as it sorts classed individuals according to cycling style or purpose, for instance the space afforded to commodified bike share infrastructure or sustainable living projects compared to individuals who bike out of economic necessity (see Stehlin, 2019; Hoffman, 2016). This sorting phenomenon leads us to ask how homonormativity contextualizes particular queer subjects with regard to political-economy and class. How does this positioning shift the meaning of a subject's gender (and sexuality), and in turn their mobility?

Building on homonormativity, the philosopher and queer theorist Jasbir Puar (2017 [2007]) extends this concept to race through the idea of homonationalism, or 'national homonormativity.' Puar argues that, prior to her text, most critiques of homonormativity focused on "the complicity of heteronorms of gender and kinship" and to some extent class (with

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[15] I find homonormativity to be extensible to a consideration of queer gender politics, like transgender or non-binary politics, since sexuality and gender are deeply entwined under heteronormativity. Additionally, I use it as such since 'transnormativity' is less used as a term.

reference to Duggan), but few discussed the homonormative entrenchment of whiteness (p. 30). For Puar, a fuller critique of homonormativity approaches queerness as an assemblage of components, including gender, sexuality, race, and nation, among others. This is akin to the model of intersectionality, but Puar argues that approaching queerness as an assemblage treats these factors as even more enmeshed: that queerness cannot be thought apart from other axes of difference (p. 212). This focus on queerness as assemblage "underscores contingency and complicity with dominant formations," i.e. it considers the way queerness is shaped by and participates in regulatory norms (p. 205)—an approach cited by queer geographers, as above. Whiteness and the neoliberal nation-state, in a similar manner to neoliberal political-economy, produce 'good' homonationalist white citizen-subjects that participate in proper civic life, entrenching norms like (gay) marriage, military service, and mass incarceration. These subjects are then counter-posed with 'bad' racialized subjects—both an improper "colored heterosexuality" and an often erased "improper (colored) nonnational queerness" (p. 78).

With regard to cycling we can connect this critique of whiteness with Melody Hoffman's (2016) focus on the bicycle and bicycle infrastructure as a "rolling signifier," a symbol with different significance for different individuals and groups, particularly as this phenomenon pertains to racialized communities (p. 6). For example, what might be seen as an ideal (e.g. healthy, sustainable) form of mobility in white communities, might conversely represent an economic necessity—or worse, a gentrification machine—in racialized communities (pp. 6-10). In the same way that the rolling signifier has been used to contextualize cycling and mobility within the racial frame, homonationalism can be used to contextualize gender and queerness

within that frame as well. That is to ask, how does racialization shift the meaning of a subject's gender, and in turn their mobility?

Both homonormativity and homonationalism provide complexity and specificity to the study of queer subjects and their movements through space. Context shapes the meaning of gender, as Hanson (2010) suggests. Homonormativity and homonationalism contextualize queer subjects, in such a way that gender (and sexuality) are shown to be bound up with class and race. In turn, this helps analyze the way gender and mobility interact regarding the specific subject being contextualized.

Conclusion

Moving forward, this study will build upon the work of geographers and other scholars within the gender & mobility literature, like Susan Hanson, Megan Heim LaFrombois, and Léa Ravensbergen and her collaborators, Ron Buliung and Nicole Laliberté. While the literature already covers the experiences of women cyclists, this project will expand beyond to other gender formations, including non-binary and transgender bicycle riders, as well as cisgender riders whose gender is intersected by queer sexuality. Performative ontologies of gender and mobility from Judith Butler and Mimi Sheller ground the methodology of my investigations into the gendered and mobile lived experiences of queer bicycle riders. Additionally, those lived experiences are spatialized by drawing on the literature of queer geography and further considered through the concepts of homonormativity and homonationalism. This additional context will enable an in-depth analysis, according to the framework put forward by Hanson (2010).

In the following chapter, I will describe the methods used in this study. These methods are rooted in the theoretical framework established in this literature review, from the subject recruitment and the crafting of survey and interview questions, to coding methods and analytic modes.

Chapter 3: Methods

Introduction

This chapter provides insight into my research design, methodology, and selection of methods for data collection and analysis. It also includes discussion of my experience as a researcher. This research collected in-depth qualitative data to document the relationship between queer gender and mobility.

I begin with a note on the ethical considerations I made when conducting this research. Next, I discuss the queer-geographic methodology in which my study design is grounded. Then, I describe the sampling, survey, interview, and analysis processes, including the coding and analytic methods employed. I conclude the chapter reflecting on challenges encountered in the research process.

Ethics Procedure

When conducting this study, I took the utmost care to proceed ethically. I chose my outreach method, discussed below, specifically holding the privacy and comfort of my participants in mind. I provided potential participants with complete information about the purpose and procedure of the study, including sending my question sheet to interview participants in advance. As a proactive measure in case of psychological discomfort during the interview process, I provided participants with a list of mental health resources in Santa Cruz County and California at large, including resources specifically focusing on queer issues.

In order to de-identify the participants, I assigned each participant a random numeric code that was used in the survey and interview consent form links. Later, I assigned semi-

random pseudonyms; they were chosen to reflect the order in which interviews were conducted, with an ‘A’ name selected for the first interview subject, ‘B’ for the second, to ‘F’ for the last. The names were also chosen in a manner to avoid similarities with the participants’ actual first names.

Methodology and Design

As a study concerned with the (non-)normative dimensions of gender and mobility, this thesis is grounded in a queer-geographic methodology. Such a methodology—combining the spatial focus of geography with the lens of queer theory—considers the operation of norms and power in and through space; or, the way that norms, power, and space shape each other. In this sense, the methodology does not stop at the borders of (queer) sexuality and gender, but becomes an expansive framework for analyzing the political dimensions of subjectivity more broadly. This is possible because all forms of subjectivity (e.g. gender, sexuality, race, class, and ability) are produced through normative processes, as effects of power, and on a spatial terrain.

This methodology inherits strategies and concerns from post-structuralist and feminist methodologies, by virtue of the genealogy of queer theory. From post-structuralism, this methodology draws its critique of binaries and analysis of power. In practice, this is best exemplified in the queer geographic critique of the division of space into ‘straight’ and ‘queer’ space in earlier geographies of sexuality. Post-structuralist queer-geographic methodology instead approaches space as a terrain in which sexualizing and gendering processes occur. Within this study, this analysis applies to mobility spaces.

From feminist methodologies, queer-geographic methodology draws commitments to embodied experience and situated knowledges. It does so by approaching the body as a scale of

geographic inquiry, while also situating the subject and the body within their social and geographic context, that is, their positionality. Queer-geographic methodology also derives from feminist methodology a commitment to reflexivity in the research process, as demonstrated in the section discussing my own positionality in the introduction chapter.

This study's methodological attention to scale, both in the scale of the body as above and at the local scale of infrastructure, is influenced by the multi-scalar mobile methodology employed in sociologist and critical mobilities scholar Mimi Sheller's mobility justice framework (2018). Sheller's methodology itself is influenced by feminist and queer theories, among others (p. 21). This multi-scalarity enables an explicit connection between transportation, embodiment, and power (p. 6).

The qualitative case study design of this study follows from its methodology. Qualitative methods are well-suited to delve into the knowledges shared by participants who are necessarily situated and contextualized by their subject positions and geographies; as feminist science and technology studies scholar Donna Haraway (1988) wrote, "I am arguing for politics and epistemologies of location, positioning, and situating, where partiality and not universality is the condition of being heard to make rational knowledge claims" (p. 589).

Conducting surveys and interviews with a small pool of participants was chosen as the best method to capture data in keeping with my epistemological commitment to situated knowledges. This data was then analyzed using qualitative coding methods and discourse analysis. The use of this methodology and study design allowed for a focus on mobility spaces within the geographic bounds of Santa Cruz County as sites in which the operation of power takes place and (re)produces subjectivity. The use of participant experiences provided direct

access to understanding the processes that take place within these spaces, through participants' experiences of becoming through the subjectivating effects of power.

Sampling

My selection criteria were adults, 18 years or older, who live in Santa Cruz County and self-identify as radical queer bike-riders, trike-riders, or cyclists. These criteria resulted in a sample size of six. I conducted the sampling by distributing a flyer both digitally and in person. The flyer positioned me as having ties to Santa Cruz and as a non-binary person: first by including my telephone number with an 831 area code and second by including they/them pronouns.

I began the sampling process in March 2022 by sending emails to two gatekeeper organizations in Santa Cruz: the Bike Church community bicycle repair space and SubRosa anarchist community space. I chose both organizations based on their queer programming and DIY ethos, which fit with my overall goal of seeking radical or non-normative queer participants. In my email I introduced myself as a graduate student and as being from Santa Cruz. In my email signature I also included my pronouns, they/them, representing myself as a non-binary person.

The Bike Church distributed my flyer via their Instagram and Facebook accounts and hung a copy of the flyer in their workspace. SubRosa shared the Instagram post created by the Bike Church and I was able to hang a flyer on the community board in their courtyard. The Instagram post was also shared by the Free Skool and the Hub for Sustainable Living community center, both organizations affiliated with SubRosa.

Throughout the research process I continued to identify gatekeeper organizations through which I could distribute my flyers. I sent my flyer and project information to an acquaintance

involved with the Ecosocialist Working Group of the Democratic Socialists of America—Santa Cruz. It was then passed on to the rest of the working group. I also sent my flyer to Pajaro Valley Pride (representing the LGBTQ community in southern Santa Cruz County), which distributed my flyer via Instagram and Facebook. I contacted Bike Santa Cruz County, but they did not distribute my flyer without specifying a reason. I posted my flyer in person at Tabby Cat Café, a coffee shop with left-wing aesthetics[16] in Downtown Santa Cruz.

In June 2022, I attended the Santa Cruz Dyke/Trans March, a companion event to Santa Cruz Pride, to conduct outreach for my project. I spoke to and distributed flyers to attendees that brought bicycles. At the event, I found that potential participants questioned whether they would meet the inclusion criteria because they were unsure if they fit the term 'cyclist,' especially due to limited use of their bicycles. This finding also matched with results I had already received from my survey that indicated that not every respondent identified with the term 'cyclist.'

I adjusted my flyer language to refer to 'bike riders' rather than 'cyclists,' hoping that this wording was more legible as including anyone who rides a bicycle. At the beginning of the fall 2022 semester, after receiving Institutional Review Board approval, I hung the redesigned flyer at the UCSC bike co-op and UCSC's Lionel Cantú Queer Center. At that time, I also hung the new flyer at the Diversity Center, Santa Cruz's LGBTQ community center, which had reinstated their open hours since my earlier rounds of flyer distribution.

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[16] Tabby Cat Café is a privately-owned business styled like a worker's cooperative, displaying socialist and syndicalist propaganda art and supporting left-wing causes like the University of California—Santa Cruz graduate student strike.

On Snowball Sampling

After the distribution of the flyers, I intended to use snowball sampling to continue to build my pool of participants. The snowball method of sampling, wherein gatekeepers and participants suggest individuals that may be interested in participating, has a tradition of use in studies concerning gender and sexuality (J. Warner et al., 2003; J. Warner et al., 2004; Browne, 2005). The method is prized for its ability to use pre-existing contact networks to build participant bases in historically closed or privacy-oriented communities. I had intended to use a sort of passive adaptation of the method, wherein I would distribute my flyer to participants, so that they could then send it to potential participants without the chance of unintentionally outing anyone by taking down contact info directly from my participants. This strategy did not work at the scale I had hoped, with only one participant indicating they received my flyer from a friend; the other participants found my flyer posted in person or on social media accounts for gatekeeper organizations.

Survey process

The survey was conducted via the Qualtrics internet survey interface and was distributed as the first stage of participation. An internet modality was used to maintain social distancing during the COVID-19 pandemic. The survey was intended to provide context for data collected during a future interview. Any potential participant who responded to my flyer and did not indicate that they would be automatically disqualified (e.g., for county of residence) was sent a link to the survey. The first page of the survey functioned as an implied consent form for the survey stage of the participation process.

I divided the survey questions into three themes, covering (1) the demographic information of the participant, (2) their political positions in terms of queer politics, and (3) information describing their bicycling beliefs and behavior. These sections contained ten, three, and seven questions respectively. The survey questions are listed in Appendix B.

The demographic questions were intended to situate the participant within the diversity of queerness and to identify the other subject positions the participant occupies. The first two questions were also used to assess eligibility for participation: "Are you 18 years of age or older?" and "Do you live in Santa Cruz County?" No other questions were used to eliminate respondents from the participant pool.

The political position questions were intended to complement a demographic question concerning political ideology, by directly addressing issues in queer politics which are contested between more radical and more liberal political orientations. I focused on three issues that I felt touched on the most common debates within our politics: same-sex marriage, LGBT military service, and LGBT business ownership (also referred to as "rainbow capitalism").[17] Each topic was associated with a list of positions featuring the following mutually exclusive choices: "I participate or want to participate in this institution," "This institution is a necessary human right, but I may or may not participate in it," "This institution is a distraction from more meaningful queer politics," "This institution is actively harmful to queer politics," and "I have no opinion on

[17] The first two topics, same-sex marriage and LGBT military service are discussed from a radical queer perspective in the volume *Against Equality: Queer Revolution, Not Mere Inclusion*, an anthology of essays from the Against Equality collective (Conrad, 2014). The inclusion of LGBT subjects in capitalist political economy is discussed in Duggan (2004).

this issue." The responses to these questions were not integrated into my final analysis but served to contextualize the participants' understandings of queer radicalism.

The bicycling questions were intended to provide a basis for understanding the mobility of the participants as bicycle riders. This was accomplished by assessing the terminology the participant identifies with ('cyclist,' 'bike rider') and the 'riding style' of the participants (what percentage of their trips are made by bicycle, what infrastructure they prefer, etc.). I also assessed the participants' attitudes about bicycle politics; but, as with the questions related to queer politics, these served more as contextualization than as a component of my final analysis.

The survey was then used to contextualize the interviews in the second stage. This allowed me to rearrange the interview prompts to ensure the most fruitful topics were covered early during the interview session, thus within the time frame. For instance, if I predicted a particular subject position or ideological belief might yield unique insights from the participant, I moved questions concerning that position toward the front of the interview session.

Interview process

Interviews were scheduled for 60 minutes, including discussing and signing the consent form. The interview was semi-structured in nature. I began with 17 questions, in four rough themes: the meaning and significance of cycling to the participant (Questions #1-4); the intersection of gender, queerness, and cycling (#5-8); gender, cycling, and other subject positions (#9-14); and cycling and feelings of safety, designed to discuss infrastructures and subject positions (#15-16). The seventeenth question was an elicitation of suggestions for sites to visit during field research. The interview questions are listed in Appendix C.

The semi-structured format was useful in that it allowed me to rearrange the questions in response to survey results, prioritize questions I thought would best match the interview participant's positionality, and add questions once the research process had begun. In particular, (dis)ability was discussed in my first interview, making me realize that I had overlooked the inclusion of that topic in my survey questions. It was asked on the fly in future interviews, in the same format as my questions about race and class.

Participants were offered the option to be interviewed either via telephone or Zoom (with video optional). Because this research was conducted during the COVID-19 pandemic, I did not offer in-person interviews. Each interview was audio recorded and later transcribed. For interviews conducted by telephone, transcription was performed by hand; for interviews conducted over Zoom, transcription was performed automatically and then cross-referenced with the recording to correct transcription errors.

Analysis process

Coding Methods

In coding, I employed a hybrid approach, as described by the qualitative researcher Jon Swain (2018). This methodology combines both deductive (theory-driven) and inductive (data-driven) reasoning by employing both *a priori* and *a posteriori* coding. I began with a number of codes in my codebook that I predicted would arise during interviews, based on literature reviewed and my own experiences as a queer bicycle rider. Among these were **Gender**, **Queerness**, **Race/Whiteness**, **Class/Capitalism/Neoliberalism**, **Risk/Safety**, **Embodiment**, **Normativities**, **Affect**, **Cars** (especially compared to bikes), **Space**, and **Infrastructure**. These formed the *a priori* section of my codebook.

In order to further develop my codebook after interviews took place, I used values coding, versus coding, and "theming the data." The qualitative education and theater researcher Johnny Saldaña (2013) describes each method in his text, *the Coding Manual for Qualitative Researchers*.

Values coding involves the development of codes (either *a priori* or emergent through interview) that "reflect a participant's values, attitudes, and beliefs," in order to then assess how the three interact as a system and how they represent the participant's worldview (pp. 110-114). *A priori* codes in this category reflected my research interests in attitudes about bicycling, including preferences about **Infrastructure** and perceptions of who or what a "cyclist" looks like (**Definition of "Cyclist"**).

Versus coding involves the development of codes that reflect dichotomous pairs within the qualitative data, which can then reflect participants' perspectives on conflict and (often asymmetrical) power balances (p. 115-118). *A priori* codes in this category focused on the conflicts that seemed most obvious to me, **Bikes vs. Cars**, **Queer vs. Not-Queer**, and between various gender formations. **Road Biking vs. Mountain Biking** was a code raised during feedback to my project proposal.

"Theming the data" stands out from the other methods surveyed in Saldaña's work, in that it is included as a method that other qualitative researchers use but Saldaña himself argues that it conflicts with his own understanding of 'themes' as the result of coding and analysis, rather than codes themselves (p. 175). Nevertheless, he describes theming the data as the use of themes, in place of codes, that describe or even interpret the phenomenon being discussed by the participant. These themes may function as a way to organize ideas captured through data

collection or even to make phenomenological insights about the participants and the phenomenon being studied (p. 175-177). For the process of theming my interview data, I began with broad themes relating to **Risk/Safety**, **Embodiment**, **Normativities**, **Affect**, and **Space**.

Through the process of coding, my codebook developed into 40 codes, divided into 8 categories. The categories are: affect, cycling, cyclist, demographics, geography, mobility, politics, and time. The individual codes are listed in Appendix D. Generally, my *a priori* codes splintered into multiple *a posteriori* codes. For example, **Affect** became one general **Affect/Feeling** code and five more specific codes representing particular affects or affective phenomena: **Freedom**, **Harassment**, **Leisure/Recreation**, **Safety/Risk**, **and Visibility**.

Analytic Methods

From my chosen coding methods, I followed Saldaña's advice to explore analytic methods, including political analysis (which Saldaña suggests follows from values and versus coding) and discourse analysis (which follows from values and versus coding, as well as theming the data).

My use of political analysis was informed by the qualitative education researcher J. Amos Hatch. In his manual, *Doing Qualitative Research in Education Settings* (which functions just as well in a non-education setting), Hatch (2002) describes political analysis as a framework for providing a firm foundation to qualitative research that takes an explicit political stance (specifically following from a feminist or critical paradigm) (pp. 191-192). He lays out steps for political analysis that include producing a self-reflexive statement concerning the researcher's positionality and perceived ideological concerns in the research context, then performing multiple passes of coding and memo-writing connecting those ideological concerns with the data

(pp. 192-198). Values and versus coding are well-suited to political analysis, in their focuses on participant's (ideological) beliefs and their perspectives on (social) conflicts. Hatch also suggests negotiating meaning with participants as a later step of analysis, but unfortunately I did not consider this technique before submitting my Institutional Review Board protocol, which specifically stipulated only a brief follow-up period in which I could contact participants (pp. 198-200).

My use of discourse analysis was informed by the qualitative psychology researcher Carla Willig. In her chapter "Discourses and Discourse Analysis," in the *SAGE Handbook of Qualitative Data Analysis*, Willig (2014) describes discourse analysis as a "careful examination of talk and texts in order to trace the ways in which discourses bring into being the objects and subjects of which they speak" (p. 341). Although she argues that discourse analysis is "not so much a recipe as a perspective from which to approach a text," Willig provides a general process and list of guiding questions which she uses to analyze a provided example (p. 344). The process of analysis begins with "careful reading and rereading of the transcript… concerned with the properties of the language used in the account." The analysis moves on to a line-by-line analysis of the transcript, writing "analytic notes… in the margins" (p. 346). Discourse analysis is supported by the use of values and versus coding, as well as theming the data. The marginal analytic notes that Willig describes can be structured as codes to capture beliefs and conflicts expressed by participants and to indicate themes that arise from the data. These notes are used to capture data about three general topics: "what was talked about (construction), how it was talked about (discursive strategies) and with what consequences (action orientation)." Cross-referencing

and integration of observations finally produces the discursive reading related to a particular discourse (p. 346).

These modes of analysis enabled an engagement with the politics and discourses of mobility regarding cycling from a queer perspective. Participant beliefs and attitudes, the discursive-material markers of mobile subjects, and the discursive dimensions of normativities allowed an analysis of the subjectivities involved in and around cycling in Santa Cruz. The material-discursive elements of infrastructure, the discourses of encounter, and the discursive dimensions of the urban/rural divide allowed an analysis of the cyclescape as a mobility space.

Challenges

As discussed above, the language concerning "cyclists" may have hindered my outreach. I found through in-person canvassing during the summer that some bike riders did not identify with the term "cyclist," featured prominently on my outreach flyer, and had reservations about whether or not they would be included in the study. This may have affected the number of potential participants who reached out to me. Regrettably I think I was not sufficiently responsive to this issue, in that I did not file with the Institutional Review Board to modify my outreach language to refer to "bike riders" until the fall semester.

Another challenge was presented by the COVID-19 pandemic. I was initially hopeful about finding participants during the pandemic, because a fellow graduate student had told me that potential participants were bored and thus were more interested in talking to someone new. That may have been the case, but it also may be true that potential participants were less likely to want to participate remotely, less likely to see flyers in physical spaces, or had additional stressors in their lives that took priority over being interviewed by a researcher.

Conclusion

The qualitative methods described in this chapter were selected to complement a strong quantitative literature concerning gender & mobility. Qualitative methods were also chosen out of the belief that they are best suited to delve into the situated knowledges held by participants. Outreach was conducted by distributing flyers to organizations around Santa Cruz County, including bicycle, queer, DIY, and left-wing organizations. This mixture of organizations was chosen to specifically seek radical queer bike riders as potential participants. Snowball sampling was attempted but was not particularly successful.

Participation occurred in two interrelated phases: my survey was designed to contextualize the semi-structured interviews. Transcripts from the interviews were coded and then analyzed using political and discourse analysis. These analytic methods were chosen to best support my goal of drawing out data directly from the lived experiences of my participants.

In the next two chapters, I will present and discuss the results of my qualitative analysis. This discussion will follow from the methods detailed here.

Chapter 4: Cyclists & Their Others

Introducing Subjectivity

Subjectivity names the ontological status of being subject to normative and regulatory processes and structures, in which meaning is ascribed to the individual or body through the operations of power (Butler, 1997). When discussing gendered subjectivity, we can consider the material and discursive practices that produce the gendered subject, including how one refers to oneself, how one relates to others, and how one dresses, speaks, and carries oneself. These practices are performed as citations of gender norms, a process which includes both practices that conform to norms and practices that resist or subvert those norms (Butler, 2011 [1993]). The performance of these practices is within the ambit of geography in that it occurs in and through space, both at the scale of the body and as the individual inhabits a wider physical and social space. Subjectivity, as a relationship between individuals and power, cannot be divorced from the spatial terrain on which it is produced.

The production of gendered subjectivity also makes reference to the other subject positions that one occupies. For instance, gender is produced in tandem with sexual orientation, racialization, and class; subjectivity becomes an assemblage of these factors. In this sense, a queer woman of color occupies a different position than a cisgender heterosexual white woman. Both are distinct assemblages of various subjectivities (Butler, 1999 [1990]; Puar, 2017). This sense of subjectivity as a complex, imbricated assemblage is critical to responding to geographer Susan Hanson's (2010) call for a deeper analysis of gender in studies on gender & mobility, as it allows for a view of gender as a multiply determined subject position.

One can also consider forms of mobility as productive of subjects, even as they intertwine with social identities (Sheller, 2018). In this chapter, I begin by addressing the question of "Who is a 'cyclist'" and describe a sense of 'cyclist-subjectivity,' an ambiguously normative, mobile subject position that arose from discussion with my participants. I then turn to the way that the positions of cyclist-subjectivity, gender, race, and class operate within the bicycle community and related community spaces, through the experiences of my participants.

Who is a 'cyclist?'

A key question in the development and process of this project has been: "who is a 'cyclist?'" During the interview phase, participants were asked to describe mental associations or an image of "a cyclist." Participants offered varying definitions and identifications or disidentifications[18] with the term. They often touched on formations of gender, race, class, and cycling purpose or intensity. These discussions built a picture of a 'cyclist-subject' that is in some cases a normative subject position and in other cases a non-normative one. The subject position is cast as normative when contraposed against bicycle users who might be considered 'just' bike riders. It is a non-normative position when viewed against the normative mobility regime of automobility. The critiques of cyclist-subjectivity from a radical queer perspective hearken back to queer critiques of normative arrangements along gendered, classed and racial lines.

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[18] 'Disidentification' is a term used by the queer theorist José Esteban Muñoz (1999) to describe a performance and subversion of subject-formation within a system of marginalization. For instance, this could refer to a queer bicycle rider not identifying with but disidentifying with the subject position of 'the cyclist' within a (cycling) culture that is gendered, racialized, and classed as male, white, and bourgeois.

Four of the six participants had particular stereotypical images of what constitutes a cyclist. Those four participants were split evenly between an uneasy acceptance of the term and an outright rejection of it being applied to them. Beatrice and Dan accept the term when it is applied to them but do not self-identify with it, due to their attitudes about what constitutes a cyclist. They understand that they are considered to be cyclists by others but personally do not believe they meet the ideal form of the cyclist-subject—an assemblage of white, male, bourgeois, and above-casual intensity. Carmen and Francis reject the term being applied to them.

For each of the four, the cyclist possesses the material markers of the 'cycling kit'—performance apparel (especially spandex) and a helmet—but also particular complementary subject positions. Beatrice, Carmen, and Francis identified the figure of the cyclist as being gendered as male and racialized as white. All four identified the figure of the cyclist as being classed as someone with the leisure time and capital to invest in cycling as a hobby. This assemblage of dominant subject positions in terms of gender, race, and class casts the cyclist-subject as a normative figure.

Beatrice and Carmen both elaborated on the question of what defines a cyclist. Beatrice based her definition primarily on frequency and dedication. To be a cyclist is to participate in cycling as an intensive sport, rather than to simply ride a bicycle as a commuter or more casual recreational rider. Cycling is a performative doing and whether someone is intelligible as a cyclist is a matter of the degree to which it is performed. This performance correlates with maleness, whiteness, and wealth in Beatrice's experience, and is exemplified in the prevalence of expensive bicycles and "bro-y vibes" in the sport bicycling communities in Santa Cruz County, both road and mountain biking. A concrete example Beatrice provided was the near absence of

"no-drop" rides from the area's Strava community, a form of social media for bicycle riders and runners. No-drop is a designation that riding groups will wait at pre-arranged meeting points to allow less capable riders to catch up with the group. The absence of this riding style, Beatrice argued, is evidence of a macho attitude within the community, one that is unwilling to make bicycle rides accessible to less intense riders.

Carmen identified the cyclist-subject as a more complex position. Rather than one that simply arises from the practical aspect of doing the activity to a greater degree than others, it is also a community governed by norms beyond cycling ability. Carmen specifically identified normative whiteness as a component in cycling, as a sport and as a (racial) community. They described cycling as a "white people sport," in the same vein as other "leisure" sports like golf. In the sense of being a leisure sport, race is tied up with class to racialize cycling as a sport governed by norms of whiteness and reliant on free time and consumer practices. But while the sport is racialized in Carmen's perspective, they also hold the belief that it is nevertheless possible for racial outsiders to join the cycling community. This is most notably the case in that Carmen identified their own father as a cyclist, despite the fact that he is Pakistani. It appears then that, in Carmen's view, compliance with norms is more relevant to membership in the cycling community than actual racialization. Being a cyclist is more a matter of performing whiteness as part of performing cyclist-subjectivity.

Edward, who fully identified with the term 'cyclist', defined being a cyclist as a relational identity. He suggested that one is a cyclist in relation to other modes of transportation, particularly in opposition to cars. Further, he suggested that other cyclists "name you as a cyclist." The quality of being a cyclist becomes a communal identity through a shared experience

and performance of mobility. This perspective was shaped by Edward's participation in AIDS/LifeCycle, a massive, annual group bike ride from San Francisco to Los Angeles. In the off-season, AIDS/LifeCycle has local communities that train together. Contrary to other participants, Edward described being a cyclist as not a normatively masculine subject position. In recounting a story about being called a faggot while cycling, he asked, "Are they calling us faggots because we're riding bikes in Spandex, or are they calling us faggots because we're actually queer?" The kit itself, primarily the skin-tight performance clothing, acts as a marker of less-than-ideal masculinity. This opens the cyclist to ostensibly queerphobic slurs on the basis of the way that they perform their mobility, as well as a modification of the perception of their gender/queerness by others.

Alex identified with the two terms interchangeably, due to his use of American Sign Language (ASL) as his primary mode of communication.[19] In ASL, he said there is no distinction between the two terms, but that he understands that 'cyclist' in English typically indicates a preference for road bicycling. "For myself, I'm not too focused on the words themselves, because in sign-language, all of it basically is what it is. It's the English versus the sign language. English has that, and it doesn't really apply to sign language." For Alex, it is sufficient to say that being a 'cyclist' is tied to one's style of cycling or infrastructural preference, rather than the status of cyclist-subjectivity being derived from norms of gender, race, or class. This also indicates the significant role that discourse plays in the construction of the cyclist-subject: without a distinct term, the subject position becomes difficult to analyze.

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[19] Alex and I conducted the interview through an American Sign Language interpreter.

Community & Community Spaces

The conceptual opposition between cyclist and bicycle rider—wherein a 'cyclist' is an assemblage of gendered, racialized, classed, and mobile markers, and 'bicycle rider' constitutes a broader category of mobile subjects who ride bicycles—often played into participants' attitudes toward the 'cycling community,' as well as toward bicycle community spaces like bike shops and the Bike Church community repair space. As with defining 'cyclist,' participants drew on gender, race, and class, but also broader ideas of interpersonal or communal politics, to express their attitudes on the community and its related spaces.

Beatrice did not think that a queer cycling community exists in Santa Cruz. She identified a women's cycling community, particularly oriented towards mountain-biking, but didn't think it is diverse in terms of gender beyond the cisgender binary nor diverse in terms of race, describing the community as "predominantly white women." Beatrice did hypothesize that queer cycling communities might be found in other geographies with greater (queer) populations, like Oakland or San Francisco.

This contrasts with Edward's perspective, wherein he has clearly found a queer cycling community in the AIDS/LifeCycle organization and event. Because the ride is oriented toward AIDS fundraising, the community around the non-profit organization is primarily LGBTQ, and demonstrates for Edward the existence of a queer cycling community. In his view, the AIDS/LifeCycle community is fairly diverse in terms of gender and sexuality. In his rough estimation it is 40-50% gay men, "a lot of lesbians," 10% non-binary or trans folks, and the rest are straight riders, particularly straight women. In terms of race, Edward suggested that AIDS/LifeCycle is more diverse than a "mostly male cycling group," but that it "mirrors the Bay

Area with slightly more whiter people." In terms of class, Edward described the community as less diverse than other cycling groups due to the nature of AIDS/LifeCycle as a long-distance touring event. This nature lends itself to more expensive bicycles and requires leisure time that lower class bicycle riders may not have. That said, Edward praised the AIDS/LifeCycle community's attempts to support economic diversity through regular bicycle and gear donations and exchanges. Because the community is "queer dominant," Edward suggested that there is "more support and less competitiveness" than with local cycling groups composed of "middle-aged, straight, white men and women—mostly men."

While the existence of a queer cycling community in Santa Cruz varies by the perspective of the individual queer bicycle rider, there is a stronger consensus when describing the nature of the cycling community in Santa Cruz County more generally. Carmen stated that they believe that the cycling community within Santa Cruz County is a "community of men" to which they themself do not belong, nor do they want to belong (recall that Carmen rejects being labeled a cyclist as well). Further, they have found experiences with that community to be "really harsh out there if you're queer," but did not elaborate. They do however connect to the cycling community on some level: when asked about self-care practices that they employ after negative interactions with queerphobic motorists on the road, they described how they call their dad on the phone to vent. "Even though I despise him when he's a cyclist, he understands it, he understands drivers, and he understands that aspect of riding a bike." This hints back at Edward's definition of a cyclist, above, in which a cyclist is defined by a shared communal experience in relation to or in opposition to cars; yet, this identity and community, for the most part, is foreclosed upon for Carmen by the other subject positions that intersect with mobility in the

construction of the cyclist-subject. The cycling community becomes unbearable to Carmen, due to the community's conscious or unconscious investments in whiteness, cisheteropatriarchy, and class society.

Carmen's perception of the whiteness of cycling communities in Santa Cruz is supported by Dan's discussion of their own community. Dan described the specific bike community to which they belong as "super white." Dan felt that one effect of whiteness is that they are granted access to the community more easily and that their knowledge regarding bicycling is privileged relative to the knowledge held by non-white bicycle riders. They also argued that this whiteness shapes the cultural activities that exist outside of or around the activity of cycling, like humor, food, or music tastes. From Dan's perspective, race and mobility intersect not only in the actual activity of cycling, but also the non-cycling cultural aspects of a bicycle community.

Beatrice, Carmen and Dan identified bike shops as having particular social positionings. Beatrice highlighted staffing specifically, describing bike shops as being staffed by "cis hetero men" (humorously noting that her 'gaydar'—her ability to discern another's sexual orientation—is "pretty good"). She suggested that bike shops typically possess a "'bro-y' vibe." Referencing the experience of having to contract repair services from such a shop elicited a loud groan from Beatrice. Dan's perception concurred with that offered by Beatrice, describing "bicycle repair spaces" as being "really dominated by cis men."

When asked whether conventional bike shops are gendered in a particular way, Carmen simply answered that they typically are. Instead of elaborating with specific reference to the bike shops themselves, Carmen asked to give a 'shout-out' to the Bike Church community bicycle repair space, for being unlike conventional bike shops. They described the Bike Church as "not

straight white male oriented." In contrast to white staff members in conventional bike shops, the presence of other brown people at the Bike Church helps Carmen feel at ease. They also noted that the Bike Church is more accessible in that it is more affordable— "I'm not gonna break my bank." This community orientation becomes explicitly political for Carmen: when asked about the politics of cycling, they focused on access and representation within the cycling community for individuals who are not "straight white male." As a method for achieving this, Carmen suggested "more community-based work, again places like the Bike Church. Like just having a place where, you know, it's pay what you can, and if you can't pay then that's okay."

Alex also spoke positively of the Bike Church but did not speak regarding bike shops as a whole. He recommended that I visit the space as a site visit, noting that, while he has yet to visit, he has heard that it is "a positive place for queer and trans people to go, and females[20] go there." Similarly, Dan speculated that the gender diversity they perceive in the younger end of the cycling scene of Santa Cruz may be a result of "spend[ing] a lot of time at the Bike Church" themself, positioning the project as possessing an inclusive atmosphere for gender variant bike riders.

Francis pointed out how, not only are bike shops gendered as spaces, they also influence the interplay between gender and mobility through merchandising. They recounted a story about a recent bicycle purchase:

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[20] Much like 'cyclists' and 'bike riders,' the ASL signs for 'females' and 'women' are the same. The interpreter used 'females' during the interview, although in English 'women' would be more appropriate, grammatically and politically, as a noun.

> The last time I went to buy a bike, uh, oh my god, they have like… there's bikes that are quote-unquote 'women's bikes' and I thought that was just ridiculous. I was looking at a mountain bike and I was like, 'oh this is nice,' and then I see the tag on it says, 'women's mountain bike,' and I was like, 'how the fuck is it a—it's a bike, it's a piece of machinery!' And, I don't know, I guess I felt alienated by that. It's bizarre to me when social roles need to be so enforced on things.

On one hand this is an example of gender shaping mobility. As Francis said, "it's absurd that there's this distinction between the two, but women's bikes tend to be marketed as for leisure and convenience, and not so much for athleticism." The gendering of the bike, as a marketing decision, influences the styles of use for that bike. But on the other hand, it is also a case of mobility and spaces dedicated to a particular form of mobility producing a certain image of women and gendered mobility more broadly. "I think being seriously, like being seriously devoted to cycling tends to be gendered male, you know? … The culture at large pictures a devoted cyclist and that's a male person." Gender and mobility are co-productive of each other in the sense that cultural gender norms shape the mobility practices and technologies of gendered subjects, but in turn these gender norms are produced and reinforced by those normative practices and technologies.

Conclusion

This chapter has described the ways gender, race, class, and mobility congeal into a spectrum of bicycling, between bicycle riders and the more normative cyclist-subject. While there is variation in perspectives on a queer cycling community in Santa Cruz County, there is more agreement that the more general cycling community there tends to be normative in terms of

gender, race, and class. These bicycle communities and related community spaces affect the constitution of mobile subjects along gender, race, and class lines. Due to a perception that bike shops fall within this more normative community, participants demonstrated a preference for the Bike Church, an unconventional, do-it-yourself community bicycle repair space. The next chapter analyzes the experiences of queer bicycle riders on a larger scale, that of the infrastructural space known as the cyclescape.

Chapter 5: Queer Bicycle Riders on the Move

Introducing Cyclescapes

If cycling-subjectivity manifests at the scale of the body (through performed activity, material markers, and an assemblage of other subjectivities including gender, race, and class), then it is also enacted at the scale of the cyclescape. The urban geographer John Stehlin (2019) uses the term 'cyclescape' to name the "material and discursive space of the bicycle" (p. xv). Stehlin draws on Foucault to describe the cyclescape as "a site of normative struggle as well as a motif of resistance" (p. xvi).

This idea of the cyclescape meshes quite well with queer geography. It shares common elements both with the earlier queer geographic concept of queer space carved from heterosexual space (analogous to bicycle space carved from automobile space) and the more current queer *approach to* space that understands all space as subject to normativities, even ostensibly 'queer spaces.' In the earlier sense, there is a particular affinity between the cyclescape and Ira Tattleman's (2000) description of queer space from a book chapter on gay bathhouses:

> 'Queer space' involves the construction of a parallel world, one filled with possibility and pleasure, while functioning simultaneously as an intervention in the world of the dominant culture… By heightening the intensified, disruptive qualities of queer imaginations and sexually coded bodies, queer space provides an alternative means of worldly inhabitation, makes visible the already-in-place hierarchies, and embraces the reciprocity of space and sexual identity. In its space

> of opportunity, we are free to construct ourselves in flexible, unspecified, and unpredictable ways. (pp. 223-224)

It is fascinating to see an admittedly romanticized idea of a parallel world as a site of resistance, flexibility, opportunity, and pleasure, shared by both bicycle infrastructure and queer spaces like gay bath houses (and I would add literally parallel, in the case of bicycle lanes). But in turning to a later sense of the queer approach to space described by queer geographers like Natalie Oswin (2008), it becomes important to recognize both 'queer space' and the cyclescape as sites saturated by the normativities of the world at large. In this sense, the analysis conducted in this chapter serves as a queer approach to cyclescapes.

Cyclescapes exist as transportation infrastructures—material and discursive technologies that manage the circulation of mobile assemblages of subjects and vehicles. In the material sense, cyclescapes exist as the paths which bicycle riders use to traverse space. These material infrastructures are often shared with other mobile subjects, like pedestrians, motorists, and public transit users. They include bike lanes, travel lanes, mixed-use paths, sidewalks, trails, bridges, and intersections, as well as supplementary technologies like stop lights, bike racks, bollards, and street lighting.

In the discursive sense, cyclescapes exist as the norms that govern the use of the above material forms. These norms include both formal laws, like those governing where one can ride and in what manner or direction, but also informal attitudes, like those governing supposed ownership and proper use of the road. These infrastructures shape the experience of gendered mobility by providing the terrain on which encounters between gendered mobile subjects occur.

Cyclescapes also operate as fields in which affects circulate. ‘Affects’ name the pre-individual, embodied feelings that move between bodies, technologies (vehicular, infrastructural, or otherwise), and environments. Affects are pre-individual and ‘economic’ in that, rather than one ‘having’ or ‘possessing’ a particular affect, affects circulate between bodies (Ahmed, 2004). Annelies Kusters (2019) describes the way mobility spaces (in the example of her research, women’s and handicapped train compartments) operate as atmospheres in which affects circulate (p. 15). The perception of these atmospheres directly informs the travel choices and experiences of mobile subjects—who, further, occupy multiple other subject positions.

Cyclescapes as Infrastructures & Affective Fields

The infrastructural preferences of the participants were fairly straight forward. During the survey, participants were asked to rank their preferences between mixed-use trails shared with pedestrians, bike lanes alongside cars, travel lanes shared with cars, and sidewalks shared with pedestrians (table 3). Mixed-use trails and bike lanes were evenly matched for first and second place. Travel lanes with cars and sidewalks with pedestrians were least popular across the board, in third and fourth place respectively. This matches with preferences of bicycle riders more generally. For instance, urban planning scholars Ralph Buehler and Jennifer Dill’s (2014) literature review of studies on bikeway networks found that facilities like bike lanes and bike paths (akin to mixed-use trails) were preferred by bicycle riders over sharing roadways with cars and sidewalks with pedestrians. Further, comparisons between preferences for bike lanes and bike paths were split (although less evenly than among my participants), with seven studies showing preference for bike paths and two showing preference for bike lanes—although the preference for bike lanes was specifically among bicycle commuters (pp. 6-7).

Table 3. Infrastructural Preferences among Participants

Participant	Mixed-Use Trails	Bike Lane	Travel Lane	Sidewalk
Alex	1	2	3	4
Beatrice	2	1	3	4
Carmen	2	1	3	4
Dan[21]	1	2	3	4
Edward	2	1	3	4
Francis	1	2	3	4

Table 3. Preference rankings assigned by participants during the survey phase. Participants ranked mixed-use trails, bike lanes, travel lanes, and sidewalks from most preferable to least preferable.

During interviews, additional preferences included low-traffic routes (Alex, Beatrice), low-traffic times of day or days of the week (Alex, Carmen, Dan), full separation from automobile traffic (Beatrice, Francis), and full separation from pedestrian traffic (Beatrice). The preferences shared via the survey and interviews show the participants as fairly typical cyclists. They are, for instance, less interested in the 'vehicular cycling' (riding in the travel lane) of the most daring of urban bicycle riders.

Affective elements of cyclescapes vary depending on the type of infrastructure and mix of road users present. For instance, a street shared with motorists presents a very different terrain from one shared with other bicycle riders and pedestrians. An encounter with motorists can

[21] During the survey portion of data collection, Dan indicated a preference for bike lanes and travel lanes over mixed-use trails. During the interview, we clarified that my survey question was ambiguous to the nature of the trails that I had in mind: Dan was picturing mountain biking trails, when I intended to ask about any trail, paved or unpaved, shared with other non-motorized modes of transportation. After giving local examples, Dan agreed that mixed-use trails are preferable to bike and travel lanes.

involve arguing in the street, or "getting into it," as Alex describes these encounters that make up the most immediate form of mobility politics. This affective transition from risk into rage is quite different from a street space that excludes automobiles. Francis recounts the pleasures produced by street closures, with the examples of street fairs or political protests. These pleasures arise from the sociality and horizontality enabled by the exclusion of automobiles: "it's a very nice feeling, you feel very social and like everybody can interact, and be on kind of a flat level with each other." The same material infrastructure of the street produces cyclescapes with different affective atmospheres through the discursive elements of infrastructure: what forms of road uses and road users are allowed or forbidden.

In Carmen's experience, encounters between bicycle riders and motorists, and queers and non-queers, are governed by visibility. As a bicycle rider, visibility is a necessity. Carmen contrasts bicycling with driving a car: "You can hide behind your car, but on a bike, you have to be visible, you have to make yourself known with people around you, so you're like… eyes on you all the time." The necessity of visibility in order to remain safe around vehicles with a greater capacity to do harm also foregrounds the bicycle rider within the affective circuitry of the cyclescape. Ironically, for the queer bicycle rider, this visibility has a double-edge: exposure to misogynist and queerphobic motorists. "I am assumed female most of the times. And I've been called a 'bitch' and I've been called words, I've been called 'the f-slur' while riding my bike by people in cars, and it's like, I don't know, I'm just riding my bike [Carmen laughs], this is all unneeded." Beyond just the creation of a hostile environment in which to transport oneself, this exposure shapes the way that Carmen presents themself to the world, as a queer person: "I try to make my bike as bland as possible, 'cause I know some people decorate their bike and do cute

stuff with it but I don't, because I don't want to be targeted by anybody… I was thinking of putting, like, streamers on it, or flags on it, but I would probably get 'hatecrimed' [Carmen chuckles] if I did."

Carmen notes that intersections in particular function as sites of negative interactions between motorists and bicycle riders. When asked about where they've been called queerphobic or gendered slurs, they rattled off a list of intersections. When asked to speculate about why these encounters mainly occur at intersections, they suggest that "maybe it's the lack of consequences, 'cause you [the offending motorist] can just drive away. And, like, I will never see them ever again." This arises from a differential capacity for movement between bicycle riders and motorists, specifically the capacity for escape. The intersection, while waiting for the light, serves as both a site for encounter but also renders the bicycle rider as a captive audience, despite their ostensible mobility. In this way, the circuitry of both transportation and affect combine to enable the flow of hate between the offending motorist and the targeted queer bicycle rider.

In more positive examples of affective circuits, both Alex and Dan expressed the idea that cycling enables one to feel connected to their environment. For Alex, this was particularly through physical challenge, and occurred both in an urban or natural trail environment. This echoes the work of urban cultural geographer Phil Jones (2012), who has written about the affective capacity of the body as it relates to one's physical ability to cycle through one's outdoor environment. Unlike motorists, bicycle riders are not cocooned; they are fully exposed, requiring what Jones refers to as "sensory discipline." For Alex this exposure and discipline—"total body

fitness," in Alex's words—leads to a positive feeling of connectivity. The cyclescape mediates the affective interplay between the body and environment more generally.

For Dan, the connection came through the convenience of bicycling. "It makes me feel connected to the place I live in because I can traverse it pretty easily." While it still requires sensory discipline, the bicycle enables movement in a way that the automobile doesn't:

> "I get to feel a lot of my own individuality with biking, 'cause I can pick routes; I can, um, not always follow traffic laws; I can ride on sidewalks and down alleys and up pathways and things; and I'm not confined to the roadways in the same way as when I'm driving a car."

The combination of the bicycle and the cyclescape capacitates the body's mobility beyond that of the automobile. Although Dan identifies bicycling as "more of a personal choice than a political choice," there is a sense of an affective, anarchist[22] politics of mobility embedded in this idea of easy traversal. The urban environment can be molded into the cyclescape as an expression of freedom, through ignoring traffic laws and conventional uses of infrastructure, to move in a less confined way than one would in an automobile.

Cyclescapes & the Rural versus the Urban

Insights about cyclescapes that address both bicycling and queerness can be achieved by comparing the rural against the urban. In terms of bicycling, the two environments present different challenges, often in terms of traffic volume or frequency of encounter between road

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[22] Dan identifies as an anarcho-communist. Anarcho-communism is a political ideology that advocates for a class-less, state-less, money-less society (communism) through a prefigurative politics of revolutionary action against Capital and the State (anarchism).

users and infrastructure quality or suitability for bicycling. In terms of queerness, the binary opposition of rural and urban is at the heart of the queer theoretical phenomenon known as 'metronormativity.' As described by Jack Halberstam (2005), metronormativity refers to a normative trope in which a queer subject 'comes out' from the rural into the city, a "conflation of 'urban' and 'visible'" (p. 36). My interviews suggest a sort of metronormativity in which, inversely, rural areas of Santa Cruz County provide a way to move further from the politics of mobility that characterize the county's more urban areas; however, it differs between participants whether this also presents a way to move further from the gendered interpersonal politics that arise from a higher frequency and visibility of encounter between mobile subjects in the urban realm.

For Beatrice, bicycling provides "a really fun way to explore the place I live." This is especially the case when one can "get out from the urban areas and more onto rural roads and being out in nature." When she lived in Watsonville, the southernmost city in Santa Cruz County, Beatrice had a particularly easy interface between the urban and rural. She gave the example of riding the Hazel Dell Loop around Corralitos, a census-designated place roughly seven miles north-northwest of Watsonville known for its apple orchards. Beatrice noted that low-traffic roads, like the country roads in Watsonville, make for fairly safe routes; however, she also expressed frustration over bad actors on those same routes: "But even then, when you're on those country roads, there's always some crazy person that drives 70 miles an hour and it's like, 'Why? Why are you doing this?'" But this seems, to her, to be an inevitability for road cyclists. "If you want to be safe and you want to be away from any cars or any people you probably have to, I don't know, scale a mountain and get to a very remote area." The answer it seems is to seek

an even more rural setting for cycling, which is not out of the realm of possibility for Beatrice, who describes the pleasures of intense climbs, but something she recognizes is dependent on ability.

Traffic also plays a large part in Edward's decision to seek out rural routes for cycling, noting "the farm roads around Watsonville" as ideal for "long mileage," since "it's all really quiet and flat." In the northern part of the county, Edward generally chooses mountain routes in Scotts Valley over the coastal route along Highway 1, particularly to avoid the automobile beach traffic that renders Highway 1 "a bit hairy," or risky. When asked about the politics of cycling, Edward describes a politics that derives from transportation planning. He finds this politics to be less "visible," or even necessary, in the Santa Cruz Mountains compared to the urbanized area of Santa Cruz. "It would be nice if there were bike lanes throughout all the roads in the Santa Cruz Mountains, but it's not that important [compared to urban roads]."

Dan might disagree with Edward, noting that rural infrastructures that lack bicycle facilities play a role in the unsafe feelings that occur while cycling outside of urban areas, particularly during encounters with automobiles. "I feel like, immediately, when cars pass, when cars pass really close to me on certain roads, especially roads with no bike path or no shoulder, like riding in the mountains on car roads, or riding along Freedom Boulevard [a rural thoroughfare heading north from Watsonville], cars pass really close and they're going really fast, that feels pretty sketchy." From this perspective, the politics of mobility do not end at the city limits.

But rural riding does not remain solely on paved roads. One participant, Alex, now only rides on trails due to a disability that impairs the movement of his left leg and thus presents a

safety risk when trying to stop around cars. Before the impairment, he found road cycling to be particularly political, "as far as road access for cyclists." This politics of mobility generally expressed itself as a conflict over street space: "We have to be on the streets, just like the cars."

Now that he rides solely on trails, Alex doesn't feel that his cycling practice is "really politically connected." Additionally, his gender and queerness while cycling "doesn't feel as significant, because just being out on the trails it feels like nobody really pays attention to that." But the reverse is not true in that he is quite aware of the gender of other trail riders. For example, when asked about sites to visit, Alex suggests, "if you want to see an example of a lot of cis white men, go to Nisene [Marks State Park, in Aptos]. Yeah, go there on a weekend. Yeah, cis men there—swamped."

Alex extends this perception to the Santa Cruz mountain biking community more generally as well: "it does seem like there's a lot of cis men. I have noticed that and it concerns me a tad bit, because it feels like a boys club." That said, at least as a transmasculine non-binary person, Alex remains able to navigate this social terrain: "But, the relationship with me, as a person, I don't feel like… that my sex is just being put out there." For Alex, the trail provides a similar sense of 'blending in' as the rural provides for small town queer folks in Halberstam's (2005) critique of metronormativity:

> "The small town can accommodate some performances even as it is a dangerous place for others—for example, an exhibition of normative masculinity in a transgender man may go unnoticed while an overt and public demonstration of nonnormative gendering may be severely and frequently punished" (p. 43).

But to ‘pass’ on the trail does not suggest a lack of politics governing the rural and off-road cyclescape, rather it presents an alternative relationship between a bicycle rider, their gender, and other trail users. While the relationship is less visibly non-normative in Alex’s case, a political arrangement still exists. Accordingly, processes of gendered subjectivation are still taking place, even if the subject’s gender-diversity goes unnoticed to others in the scene.

Conclusion

This chapter has provided examples of the ways cyclescapes, as infrastructures, shape the relationship between bicycle mobility and queer gender, acting as sites of encounter and affective atmospheres in which normativities of gender, race, class, and mobility interact. Further, I have described the way this interaction varies between urban and rural contexts through an attention to the metronormative dimensions of cycling and bicycle politics.

In the final chapter, I provide conclusions drawn in this and the preceding discussion chapters. I discuss contributions made to the gender & mobility literature, implications of this research, and future directions for research.

Chapter 6: Study Conclusion

Through this thesis, I set out to investigate the ways in which gender and mobility co-produce each other in the lived experiences of radical queer bicycle riders in Santa Cruz, CA. Additionally, I also asked how other forms of subjectivity, like race and class, and mobility spaces, like streets and trails, shaped the experiences of these bicycle riders.

A review of the literature on gender & mobility demonstrated that this particular population was not explicitly considered in previous studies on gender and cycling. This gap formed the initial motivation for the project. By also reviewing the literature on gender and mobile ontologies, I was able to understand the way these ontological frameworks could be used together to develop the gender & mobility literature with specific attention to queer bicycle riders. Consideration of additional themes from queer theory, particularly homonormativity and homonationalism, allowed for a deeper understanding of the ways other forms of subjectivity might be incorporated in understandings of gendered and mobile subjectivity. Literatures on queer and bicycle geographies also provided a way to consider the mobility spaces of queer bicycle riders, through a queer approach to 'cyclescapes.'

In order to address queer bicycle riders from a gender & mobility perspective, I used the gendered and mobile ontologies and geographies described above to theoretically ground a qualitative case study examining the relationship between gender and mobility in the lived experiences of radical queer bicycle riders in Santa Cruz County. I collected data from adult queer bicycle riders who resided in Santa Cruz County using both an online survey and a semi-structured interview. The survey data was used to contextualize the beliefs and experiences of

participants and discourse analysis was used to understand the themes present in our interview transcripts. This process resulted in an understanding of the participant's experiences occurring at two scales. First, at the scale of the body through subjectivity and, second, at the scale of infrastructure via interactions in the cyclescape, the material and discursive terrain on which bicycling occurs.

This work contributes to the gender & mobility literature by directly approaching queer bicycle riders as the study population. It does so in a way that responds to Hanson's (2010) call for studies that more deeply synthesize the topics of gender and mobility and it does so at both scales described above.

First, the study theorizes a radical queer conception of 'cyclist-subjectivity,' by using a queer lens to understand the 'cyclist' as a normative mobile subject contrasted with the more general 'bicycle rider.' This allows us to draw upon gender and mobile ontologies to examine the way gender and mobility are productive of subjectivity in normative and less normative ways. We are also able to observe the way that this process does not occur solely through reference to gendered and mobile subjectivity but draws on the other subject positions a queer bicycle rider occupies. Gender and mobility are inseparable from other subjectivities like race and class. Further, we are also able to examine the ways this productive process occurs within bicycle communities and their related spaces like bicycle shops.

Second, the study analyzes bicycle space—the cyclescape—through a queer approach to space drawn from queer geography, considering the experiences of queerly-gendered mobile subjects at the infrastructural scale, as they move through Santa Cruz County. This allows for an understanding of the cyclescape as a site of normative processes. The cyclescape, like 'queer

space,' is not essentially separate from normative structures of gender or mobility, nor is it essentially radical by virtue of being ostensibly non-normative (in comparison to space occupied by automobiles). This queer approach is a novel methodology for understanding the way infrastructure modulates the relationship between gender and mobility and shapes the production of gendered and mobile subjects.

This study reframes thinking about the gender dynamics at play in bicycle communities, particularly with regard to non-normative forms of gender outside of the cisgender heterosexual norm. Through centering non-normative queer voices, this study makes clear the subjects who are excluded from these communities—often unintentionally, it seems, through ignorance of normativities accepted in said communities. This can then provide the basis for radical interventions into cycling to develop queer, or queer-inclusive, cycling communities.

This research began as an exploration into the dynamics of gender and cycling within the specific geography of Santa Cruz, CA. It is clear from the wealth of data collected from only six participants that more study on the topic is warranted. Future research directions could include an expansion of this specific study to a larger sample size; a study that incorporates additional subject positions beyond race and class, like age and ability; a study that evaluates the gender dynamics of unconventional bicycle community spaces, like the Bike Church community repair space, and their role in the lives of queer bicycle riders; and a comparative geography study that analyzes the queer bicycle rider population in Santa Cruz alongside similar populations from other cities, like San Francisco or Oakland, CA. Depending on the location, a media analysis of local news coverage of queerness and/or gender and cycling may be fruitful; however, a survey

of the archives of the Santa Cruz Sentinel did not reveal any reference to bicycling and gender, beyond the existence of women's divisions in local bicycle races.

Another potential direction is to interview participants across the spectrum of normativity (similar to the way Heim LaFrombois [2019] interviewed both women and men cyclists) to compare their experiences and potentially identify sites of cross-normative alliance. A similar comparative strategy could be used to compare the approaches of traditional and non-traditional bicycle organizations to queerness and gender, for example comparing an organization like Bike Santa Cruz County with the Bike Church.

In addition to the specific subjectivities and geographies involved in this study, it is also relevant to mobilities more generally. The study provides an example of the way normativities operate within mobility spaces like the cyclescape, which can serve as a basis to evaluate the operation of normativities within mobility more broadly. In this sense, one can employ a queer geographic lens to further a larger goal of more just mobilities.

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Appendices

Appendix A: Participants and Selected Survey Answers

Pseudonym	Gender	Pronouns	Trans*[23]?	Queer?	Sexual Orientation	Race, ethnicity, and/or nationality	Social and/or economic class
Alex	Transmasculine non-binary	He or they	Yes	Yes	Queer	White/US citizen	Skilled working class*
Beatrice	Female, fluid, non-conforming, queer	She/they (mostly she)	No	Yes	Queer*	White / Caucasian	Middle-Upper Middle Class
Carmen	None	They	Yes	Yes	Queer	Mixed, Mexican / South Asian	Low income
Dan	Non-binary man	They or he	No	Yes	Bisexual / pansexual	White Jewish American	Professional class, with some inherited wealth
Edward	Cisgender male	He/him/his	No	Yes	Gay	White	Middle-class / professional
Francis	Ambivalent, perceived as male*	Any; prefers they/them	No	Yes	Mostly attracted to men*	White, citizen of the US and UK, Irish heritage*	Upper proletarian, unemployed*

Pseudonym	Cycling identifications	Cycling Mode	Frequency
Alex	Bicycle Rider, Cyclist	I only ride a bike for recreation	3-4 days a week
Beatrice	Bicycle Rider, Cyclist	More than half of trips not made by foot	3-4 days a week
Carmen	Bicycle Rider	All trips not made by foot	Every day or nearly every day
Dan	Bicycle Rider, Cyclist	More than half of trips not made by foot	Every day or nearly every day
Edward	Bicycle Rider, Cyclist	About half of trips not made by foot	3-4 days a week
Francis	Bicycle Rider	More than half of trips not made by foot	Every other week

* in a non-header cell indicates abbreviated long-form answer.

[23] 'Trans*' is an umbrella term for trans identities that includes non-binary, genderqueer, agender, bigender identities, in addition to male-to-female and female-to-male transgender identities; However, not all individuals who could claim the term choose to do so.

Appendix B: Survey Questions

Demographic Information

1. Are you 18 years of age or older? *
    a. yes/no
2. Do you live in Santa Cruz County? *
    a. yes/no
3. How would you describe your gender?
    a. textbox
4. What pronouns do you use?
    a. textbox
5. Do you consider yourself trans*?
    a. yes/no
6. How would you describe your sexual orientation?
    a. textbox
7. Do you consider yourself queer?
    a. yes/no
8. How would you describe your race, ethnicity, and/or nationality?
    a. textbox
9. How would you describe your socio-economic class?
    a. textbox
10. How would you describe your political beliefs? (Can include left-right spectrum, party/organization, ideology, etc.)

a. textbox

Queer Politics Positions

Select the statement that most closely represents your opinion.

- Same-sex marriage
    - I participate or want to participate in this institution
    - This institution is a necessary human right, but I may or may not participate in it
    - This institution is a distraction from more meaningful queer politics
    - This institution is actively harmful to queer politics
    - I have no opinion on this issue
- LGBT military service
    - I participate or want to participate in this institution
    - This institution is a necessary human right, but I may or may not participate in it
    - This institution is a distraction from more meaningful queer politics
    - This institution is actively harmful to queer politics
    - I have no opinion on this issue
- LGBT business ownership (“rainbow capitalism”)
    - I participate or want to participate in this institution
    - This institution is a necessary human right, but I may or may not participate in it

- This institution is a distraction from more meaningful queer politics
- This institution is actively harmful to queer politics
- I have no opinion on this issue

Cycling Information

1. Which of the following terms, if any, do you identify with? Check all that apply:
    a. Bike rider
    b. Cyclist
    c. Tricycle rider
    d. None of the above
2. Which of the following statements most closely represents you?
    a. I ride my bike for all trips not made by foot
    b. I ride my bike for more than half of trips not made by foot
    c. I ride my bike for about half of trips not made by foot
    d. I ride my bike for less than half of trips not made by foot
    e. I only ride my bike for recreation
3. Which of the following statements most closely represents you?
    a. I ride my bike every day or nearly every day
    b. I ride my bike 3-4 days a week
    c. I ride my bike 1-2 days a week
    d. I ride my bike every other week
    e. I ride my bike once a month or less

4. Rank the following riding styles from most preferred (top) to least preferred (bottom)

a. in the travel lane, with cars

b. in the bike lane, separate from cars

c. on the sidewalk, with pedestrians

d. on mixed-use trails, with pedestrians

5. Are you a member of a bicycle advocacy organization?

a. yes/no

6. If yes, which?

a. textbox

7. Rank the following styles of bicycle activism from most preferred (top) to least preferred (bottom)

a. Direct action, like “taking up space” (particularly in automobile travel lanes)

b. Distributing resources to those in need, like bicycles, helmets, lights, services, etc.

c. Encouraging family, friends, and colleagues to bicycle

d. Lobbying local government for more bicycle infrastructure (lanes, signage, etc.)

e. Lobbying local government for stricter vehicle code enforcement

f. Participating in group rides or other bicycle events

g. Recording and sharing your experiences as a bike rider

Appendix C: Interview Questions

1. What does cycling/bike-riding mean to you?
2. What are the most significant or meaningful places or routes for you when you ride?
3. Do you ride for particular purposes, situations, or circumstances?
4. How does cycling make you feel (emotionally, physically, etc.)?
5. Are there particular times while cycling that you feel your gender or queerness is significant (to yourself, to others)?
    a. Can you identify a particular moment in the past?
6. Are there times you feel that your gender and/or queerness is more visible or more apparent while cycling (e.g. being perceived as your gender, or as queer)?
7. Are there times you feel your gender and/or queerness is less visible or less apparent while cycling?
8. Do you feel that cycling, as a mode of transportation, as a sport, or as a form of recreation is associated with one gender over other genders?
9. Do you feel that your race affects your understanding of your gender/queerness?
10. Do you feel that your race affects your experience as a cyclist?
11. Do you feel that your class affects your understanding of your gender/queerness?
12. Do you feel that your class affects your experience as a cyclist?
13. What are your associations with the idea of being a cyclist? Does the idea bring up a particular image for you?
    a. Do you feel that there is a difference between a cyclist and a bike-rider?
    b. Are you a cyclist, a bike-rider, or both?

14. Would you describe cycling as “political” for you? Can you give examples of how your politics intersect with cycling? Are you part of a bicycle advocacy group?
15. What are places or moments that you feel safe cycling?
    a. Are there particular locations or styles of bicycle infrastructure that make you feel more safe (e.g. bike lanes, multi-use trails, standard travel lanes, slow streets)?
    b. Are there particular times of day or days of the week that make you feel more safe?
16. What are places or moments that you feel unsafe cycling?
    a. Are there particular locations or styles of bicycle infrastructure that make you feel less safe (e.g. bike lanes, multi-use trails, standard travel lanes, slow streets)?
    b. Are there particular times of day or days of the week that make you feel less safe?
    c. Do you think your experience around feeling unsafe while cycling would be different if you were a different gender, or cisgender, or not queer at all?
    d. Do you have strategies that help you make yourself feel safer?
17. Can you recommend blocks or intersections in Santa Cruz I should visit during my field research? If so, could you indicate the location on a map?

Appendix D: Code List

A priori codes

Gender
Queerness
Race/Whiteness
Class/Capitalism/Neoliberalism
Risk/Safety
Embodiment
Normativities
Affect
Cars
Space
Infrastructure

A posteriori codes

affect/feeling
affect: freedom
affect: harassment
affect: leisure / recreation
affect: safety/risk
affect: visibility
cycling: assemblage
cycling: convenience
cycling: aesthetics
cycling: culture
cycling: purpose
cycling: type: road biking
cycling: type: trail riding
cyclist: definition
cyclist: identification with
demographic: ability
demographic: age
demographic: class
demographic: gender
demographic: queer
demographic: race
geography: bike shop
geography: embodiment
geography: environment
geography: location

geography: rural
geography: space
geography: tourism
geography: urban
mobility
mobility: bike cf. car
mobility: car
mobility: infrastructure
mobility: mixed use
mobility: speed
mobility: traffic
politics
politics: community
time: day of week
time: time of day