An Exploratory Assessment of Parklet Usage in Seattle: Methods and Findings

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Abstract

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This thesis explores the current demand for and use of parklets—small, public spaces built in the curb space typically occupied by a few parked cars—in Seattle. By testing the underlying assumption that parklets are a worthwhile use of limited right-of-way, this thesis characterizes how they currently function as public spaces and if usage aligns with what is considered in the field of urban design to typify desirable public space. This study builds on the concepts established in the scholarship on public life studies and incorporates the methods used by other cities to assess the success of parklets. The objectives of this research are (1) to develop criteria for evaluating parklet success by referencing the larger body of scholarship on public space evaluation and through consultation with Seattle Department of Transportation staff, (2) to understand Seattle parklet usage and determine each site's success based on criteria established, (3) to analyze the differences between usage across sites, and (4) to hypothesize some likely factors at play that affect each of the parklets' success as a public space. Methods used

include the development of measurements for assessing parklet usage, creating instruments to collect observational data, primary data collection through observational field research, and secondary data collection.

This study finds that each of the nine parklets included in the assessment exhibits its own patterns of usage in terms of number of people using the space, demographic diversity of users base, activities accommodated, and the social dynamics of the space. While each site is unique and complex, the functional life of these spaces can be summarized in four distinct categories: (1) thriving public places, (2) popular private spaces with limited public purpose, (3) slower-paced spaces with to-scale usage, and (4) underperforming spaces. Initial results point to possible relationships between usage and the following external factors: residential density, number of customer-facing businesses on the block, and pedestrian volume, among others. The thesis concludes with recommendations for the Seattle Department of Transportation to consider in the future related to the management and evaluation of these spaces, including the clarification of program goals and opportunities for further research.

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I would like to thank Rachel Berney, who was an engaged and enthusiastic committee Chair throughout the process. She provided insightful feedback and reminded me always to breathe and keep perspective. Thank you.

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CHAPTER 1: INTRODUCTION

As the City of Seattle grows in population and density, existing open space is increasingly in demand; interventions in the right-of-way to develop public space in the form of parklets, streateries, and "pavement to parks"[1] have emerged as possible solutions to this problem. This thesis explores the current demand for and use of parklets—small, public spaces built in the curb space typically occupied by a few parked vehicles—in Seattle. This research is timely as there is momentum for public space in the right-of-way as an innovative solution to concerns about open space in the City of Seattle, with vocal support coming from both Seattle Department of Transportation (SDOT) Director Scott Kubly and Mayor Ed Murray. In fact, in the most recent draft of the 2035 City of Seattle Comprehensive Plan, parklets have been identified as an important use of right-of-way and a valid method of providing public space moving forward (City of Seattle, 2016).[2]

Now that eight parklets and two streateries have been constructed, it is an appropriate time to investigate how they are being used and assess their effectiveness at providing desirable public space. This thesis provides feedback to SDOT to help staff to deliver the Parklet Program and Streatery Pilot Program more effectively to ensure it is responsive to the City of Seattle's goals and larger principles in the field of urban design.

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[1] "Pavement to parks" is an initiative to repurpose underutilized and excess right-of-way into public spaces; unlike parklets and streateries, these spaces are not limited to curb space.
[2] In the Transportation element of the 2035 Comprehensive Plan for the City of Seattle, the following policy was outlined, related to parklets: "T 2.15 Create vibrant public spaces in and near the right-of-way that foster social interaction, promote access to walking, bicycling, and transit options, and enhance the public realm" (City of Seattle, 2016, p. 75).

WHAT ARE PARKLETS AND STREATERIES?

The City of Seattle defines “parklet” as “a sidewalk extension, usually in the parking lane, that provides more space and amenities for people using the street” (City of Seattle, 2016, p. 189). A parklet is a new type of public space that occupies the right-of-way typically devoted to street parking for one or two vehicles. As the name suggests, parklets are intended to function as a mini-park, providing a place for the public to enjoy. The typical design consists of a platform structure that is placed in the roadway, so that the height aligns with that of the adjacent sidewalk. Parklets themselves are typically considered temporary structures, and are not permanently affixed to the street. In fact, some cities allow parklets only during favorable seasons. Parklets come in a variety of designs, but typically have seating and landscaping elements; additional amenities include play features, protection from the elements, and bike racks.

“Streatery” is the name the City of Seattle has bestowed to a specific type of parklet that is associated with a neighboring restaurant or bar. Similar to the Street Seats program in Portland, Oregon, the business hosting the streatery has the capacity to use the space exclusively for table service during the operating hours, but it must remain a public space open to all when the business is not in operation. Thus, unlike parklets, streateries function as a private space part of the time.

In the interest of brevity for this report, I largely use the term “parklet” to refer to both types of spaces in question: public parklets and partly private streateries. In those instances in which a distinction must be made, I carefully distinguish between the two types.

PARKLETS IN SEATTLE

The City of Seattle's Parklet Pilot Program was launched in 2013 by SDOT with the following program goals:

1. Activate Seattle's streets through unique, community-driven projects
2. Support local businesses and promote economic vitality in commercial districts
3. Supply new spaces for community interaction
4. Encourage walking, biking, and the use of transit
5. Provide safe, comfortable, and useful public spaces within the right-of-way

The program takes a community-driven approach, with local businesses and organizations proposing and funding parklet projects.[3] SDOT accepts applications, and works with applicants to ensure that the projects do not adversely affect pedestrian mobility, curb use needs, and utility access. SDOT also manages the iterative process of designing the space, encouraging elements that will facilitate use and be visually appealing. Each applicant is required to provide concept design, site plans, construction drawings, and evidence of support from local businesses and community members, which are all reviewed by SDOT staff. Additionally, applicants must submit a maintenance agreement. Once approved, SDOT provides an annual permit on the condition that the host maintains the parklet to the standards agreed upon. The city has no role in the ongoing maintenance and management of these spaces and requires that

[3] According to SDOT, parklet cost can range between $15,000 and $50,000 depending on design and materials used. Permitting fees alone cost hosting businesses around $1,300 as of 2016. Once installed, parklets are subject to a $140 annual renewal fee (Seattle Department of Transportation, 2016a).

hosts secure liability insurance for the project; that said, SDOT does conduct inspections in response to complaints filed.

The pilot phase of the parklet program was designed to give SDOT some flexibility in determining the best approach to siting, managing, and permitting these spaces during the first two years of the initiative with a select few projects, before developing more clearly defined rules and processes governing the program. Transitioning out of the pilot phase into a full program in 2015 after conducting an evaluation of pilot projects, the city has indicated that parklets will remain a long-term initiative, thus giving applicants some peace of mind that the program will not disappear in the foreseeable future. SDOT staff are currently in the process of developing legislation to define and codify parklets as a regulated use of public right-of-way in the Seattle Municipal Code, rather than operating on a more ad-hoc manner programmatically.

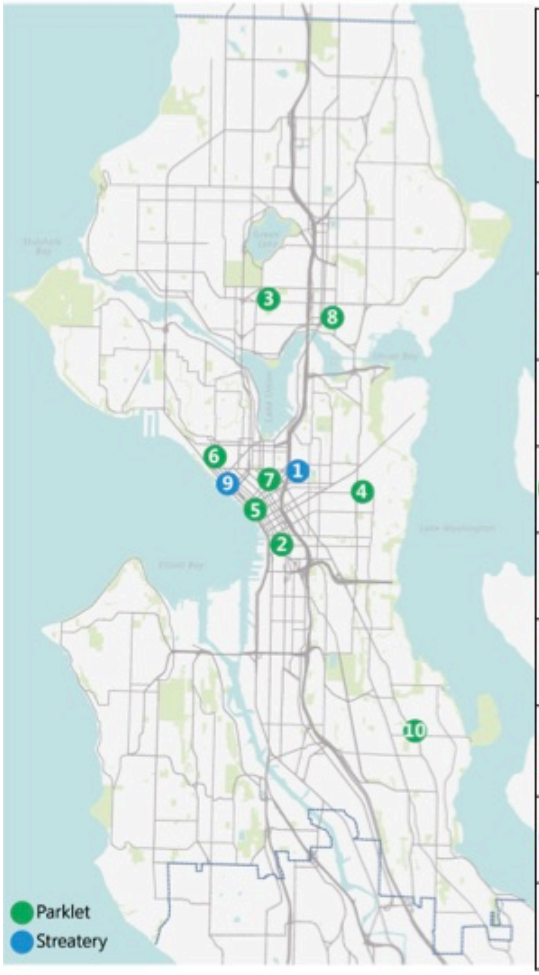
In 2014, the Streatery Pilot Program was developed to test the idea of allowing private businesses to use parklet-like spaces for table service in an effort to bring more activity and vibrancy to the sidewalk. While the application and permitting process is largely the same for streateries as it is for parklets, there are a couple points of departure. First, streateries must comply with the design requirements established by the Washington State Liquor and Cannabis Board for those hosting businesses that serve alcohol in the space. This means that some form of fencing or barrier that measures at least 42 inches tall must separate the serving space from the sidewalk. Second, in addition to the review fee and right-of-way occupation fee applicable to parklets, streatery hosts must also pay

an annual replacement fee for each parking space occupied by the streatery.[4] Since there is a clear direct economic benefit to streateries as compared to parklets, SDOT requires streateries to pay this additional fee for their exclusive use of the right-of-way during business hours.

As of May 2016, eight parklets and two streateries are in operation across diverse neighborhoods in Seattle, including Belltown, Capitol Hill, Central District, Chinatown/International District, Denny Triangle, Downtown, Hillman City, University District, Uptown, and Wallingford, as shown in Figure 1 below. Due to the relatively slow yet steady flow of applications, SDOT has not needed to limit the number of active projects at any given time. Although staff have not had to be discerning about which projects to accept into the program, that could very well change in the future. If the program were to continue to grow, it would be important for SDOT to understand which of the sites are most successful, and which design elements or siting criteria should be prioritized in projects.

[4] These fees differ based on if the space is located in a pay-to-park area (around $4,400 per year) or not (around $1,700 per year) (Seattle Department of Transportation, 2016b).

Figure 1. Map of Constructed Parklets and Streateries as of May 2016



	Name	Date Opened	Neighbor-hood	Adjacent Business	SqFt
1	Montana Bar	Sept 2013	Capitol Hill	Bar	168
2	Chinatown / International District	June 2014	Chinatown/ International District	Bubble tea shop	132
3	Molly Moon's	Sept 2014	Wallingford	Ice cream shop	126
4	Cortona Cafe	Sept 2014	Central District	Coffee shop	483
5	Chromer Building	Dec 2014	Downtown	Restaurant/ bar	718
6	Uptown	Feb 2015	Uptown	Cinema	280
7	Terry Ave	May 2015	Denny Triangle	None	275
8	U District	June 2015	U District	Coffee shop/ news stand	256
9	Some Random Bar	Oct 2015	Belltown	Restaurant	408
10	Tin Umbrella	Nov 2015	Hillman City	Coffee shop	256

RESEARCH APPROACH

This project grew out of my internship with the Seattle Department of Transportation's Public Space Management group beginning in June 2015. In summer 2015, I led the evaluation efforts for five select parklets, including designing and executing short-term site observations (20 minutes each), administering parklet user intercept surveys, pedestrian intercept surveys, local business surveys, and hosting business surveys. Although this research was important for collecting information regarding perceptions of and opinions about the space and the parklets' impact on local businesses, it did not

accurately capture data on the demand for these spaces. This thesis thus builds on the information gathered in summer 2015, adding nuance related to the observed usage of these spaces by using a more in-depth approach to data collection.

Most post-occupancy evaluations in the field of urban design are conducted to understand how a public open space is being used so that it can be improved and tailored to meet the needs of current and future users. Many of the methods I undertook in this study align with those typical of post-occupancy evaluation, in that I am attempting to characterize the usage of these spaces. However, instead of undertaking this task in order to improve existing spaces, I approach this project with a more fundamental question: namely, whether the very idea of parklets—a relatively new experiment in placemaking—is one that works for Seattle. In this sense, I am testing the underlying assumption that parklets are a worthwhile use of limited right-of-way by characterizing how they currently function as public spaces and if usage aligns with what is considered in the field of urban design to typify desirable public space.

Therefore, the reader should understand this research as a more programmatic approach to understanding usage and the functional variation of these spaces as currently implemented, rather than a typical design-centric approach.

ORGANIZATION OF REPORT

Chapter 2 begins with a discussion of the relevant literature on urban design, placemaking, and public life studies, which serves as the theoretical and methodological foundation of this study. There is also a brief synopsis of the types of research that have been conducted on parklets to date to illustrate where this thesis is situated within the

larger body of work. Chapter 3 describes the overall methodological approach of this parklet public life study, as well as detailed methods used through the course of the data collection and analysis processes. Chapter 4 provides select results and key findings from the data collected in the field. The thesis concludes in Chapter 5 with a discussion of the key themes elucidated from the research and their potential implications on the future of parklets and streateries in Seattle.

CHAPTER 2: LITERATURE REVIEW

This chapter first recounts a brief history of parklets. Then, a summary of the key researchers in the field of public life studies is discussed with an emphasis on methodological approaches. This body of literature frames this project's understanding of what makes a successful public space and how it can be applied to the parklet context at hand. Finally, the chapter concludes with a synopsis of the research on parklets that has been conducted to date to understand the functioning of this new typology of public space.

A BRIEF HISTORY OF PARKLETS

Many cities realize that creating new open space in dense central neighborhoods is too expensive to feasibly execute. Interventions in the right-of-way—including parklets and pavement plazas—have surfaced as an innovative approach that can provide a quick, inexpensive solution to the open space dilemma. Parklets—public spaces built in the roadway to replace a few parking spots—have developed alongside a growing interest in tactical urbanism, a larger trend reshaping urban public space that essentially serves as a critique of rational, top-down, status quo planning approaches (Hou, 2010). Tactical urbanism focuses on temporary interventions that are both cheap and easy to implement, encouraging experimentation and adaptation of existing infrastructure to better suit the needs of the local community and improve safety for pedestrians and bicyclists (Loukaitou-Sideris, Brozen, & Callahan, 2012).

The San Francisco-based design firm Rebar first conceived of the idea of a parklet in 2005 by installing a two-hour temporary public park in a metered parking space. Complete with artificial turf and a bench, this initial design idea of extending social life into parking spaces was fundamentally an act of guerilla art perfectly in line with the goals of tactical urbanism. Inspired by the international response to their original installation, Rebar developed a design manual and made it widely available and free in order to guide others in making these mini-parks. This original idea has since grown into an annual, international event called PARK(ing) Day, which encourages communities to repurpose parking spaces for a single day. Soon after PARK(ing) Day's inception, cities across North America began formalizing the idea through the permitting of parklets in the form of longer-term temporary structures (Loukaitou-Sideris et al., 2012).

Drawing on the innovation coming out of San Francisco, in 2008 New York City launched a Pavement to Plaza Program, allowing community groups to propose projects that would convert underutilized roadway space into pedestrian-oriented places. New York City's main focus has been on repurposing residual roadway space into pedestrian plazas, rather than the smaller-scale parklet projects, although they are still permitted seasonally. The transformation of Times Square into a pedestrian space by rerouting traffic and developing plazas epitomizes New York City's efforts (Loukaitou-Sideris et al., 2012). San Francisco followed suit in 2009 by establishing a formalized Pavement to Parks program, a collaborative effort across multiple city agencies (Panganiban & Abad Ocubillo, 2014). Since its pilot year, the number of parklets has grown from only five in 2010 to over 40 parklets in 20 different San Francisco neighborhoods as of 2014.

Cities across North America have developed pilot programs to test the viability of the parklet idea. Many have gone on to institutionalize these spaces through full program administration. Cities that have initiated parklet efforts represent a wide variety of sizes, demographics, and climates across North America, including, among others: Boston, Chicago, Dallas, Long Beach, Los Angeles, Montreal, Oakland, Philadelphia, Phoenix, Portland, Vancouver, and Washington D.C. Consistently across these cities, parklet programs rely on stated goals related to placemaking and local economic development, including fostering social interaction among people, improving livability, enhancing streetscapes, increasing patronage of local businesses, and making desirable places for residents, businesses, community groups, and visitors alike to enjoy (Loukaitou-Sideris et al., 2012).

The development of this new typology of public space begs the question: how does one assess the success of parklets? To answer this question, it is critical to understand the existing literature on how public spaces operate and what separates successful spaces from less successful places. The extensive literature on public life studies provides insight on how to understand the use of these spaces, discussed in detail in the next section. As cities begin making decisions about how best to manage these spaces, they will need to appropriately evaluate them to understand under what conditions they are most successful or if they are even an appropriate use of curbside space given congestion stressors in major cities. The subsequent section summarizes the research conducted to date on these spaces.

STUDYING PUBLIC LIFE

The purpose of this thesis is to understand how parklets, as a new typology of open, public space, operate and what role they play in the larger urban fabric of Seattle. There is a rich scholarship within the fields of urban planning, landscape architecture, environmental psychology, and sociology that describes what makes for good public space, in terms of how meaningful, democratic, responsive, and diverse it can be (Mehta, 2007). This thesis draws directly from many of the key thought leaders in order to build on existing scholarship. The following section discusses their ideas about and approaches to studying social life in public spaces, with an emphasis on the work of William H. Whyte and Jan Gehl. Although many of the conclusions presented by the authors in this section may appear commonsense, they were at the time quite provocative because they differed substantially from the larger urban design practice of the time. Each of the researchers discussed in this section provided significant contributions to how we now understand the role of streets as public places and has directly informed the development of performance criteria developed in this project to evaluate Seattle's parklets.

A SHIFT IN SCALE

As the field of urban design has grown, practice has moved away from standardized, top-down, rational approaches toward a more incremental approach to city building, coinciding with a growing interest in decentralized processes and participatory action. Focus has shifted toward context-driven, empirically based design, exercised within the smaller scope of the public realm, rather than entire cities or regions. Naturally, because of this shift in scale, social sciences entered the discussion to understand at a closer

level of detail the complexities of social life in urban areas. Researchers have relied on observational techniques to understand how the fundamental urban spaces such as streets and plazas are used, rather than planning from a wide-scale belief in a normatively correct design of a city. The idea of placemaking came out of this approach, with an attempt to understand the social factors shaping cities and the psychological factors that impact users (Birch, 2011).

One of the critical ways in which urban designers have attempted to move away from the top-down planning paradigm is by focusing on streets as the center of public life. Although right-of-way comprises between 25 to 35 percent of all land in American cities, it largely serves only limited purposes as currently designed: to facilitate movement and storage of automobiles (Macdonald, 2011). Our understanding of what can be considered public space has become more privatized (e.g., corporate plazas, shopping malls) at the expense of the vibrancy of traditional street activity (Mehta, 2007). Urban designers have emphasized the multifunctional potential of streets to be places of social, political, and commercial interaction, not just a setting for vehicle movement. As it currently stands, street design privileges automobile movement to the detriment of all other possible uses (Macdonald, 2011). Urban designers have encouraged planners to consider the potential for streets to "bring people together, help build community, cause people to act and interact, to achieve together what they might not alone" (A. B. Jacobs, 1995, p. 312).

One of the key figures in ushering in this sea change in how we value streets as public places was Jane Jacobs, who in 1961 published *The Death and Life of Great American Cities*, a quintessential rebuttal of centralized urban renewal projects. Jacobs lauded

mixed-use, dense environments with small block sizes and connected street patterns because of their walkability, social connectivity, safety, and vitality. She outright rejected the expert-driven paradigm of urban renewal in favor of understanding how cities actually function. Jacobs' approach underscores the growing importance of studying public space, since the demise of the public realm was seen as one of the largest tragedies associated with the 20th century approach to urban planning. As such, one of her most important contributions to the field of planning was her ability to describe the everyday functions and qualities of the most fundamental elements of the urban environment: "streets and their sidewalks, the main public places of a city, are its most vital organs" (J. Jacobs, 1992, p. 29). Although derided by some within the profession for not having any academic background in urban planning, her quotidian, qualitative perspective of what makes cities vibrant, safe, and healthy has left an unquestionable mark on the field ever since.

Kevin Lynch was one of the first planners to diverge from the top-down planning paradigm by focusing his scholarship on city dwellers' perception of urban space, rather than the theory-driven practice typical of the time. Published in 1960, Lynch's seminal *The Image of the City* is an exploration of how we understand and structure urban form psychologically. The book attempts to define how individuals perceive, react, and respond to their environment by identifying a number of elements that individuals use when making mental maps of cities: paths, edges, districts, nodes, and landmarks. These elements, and how well they come together to make a legible urban form directly influences how individuals conceive of space and thus affect usage.

WILLIAM H. WHYTE

Two decades following the release of *The Image of the City*, William H. Whyte conducted large-scale observational research on social patterns in public spaces in New York City to document the differences between successful and languishing public spaces. In his 1980 book, *The Social Life of Small Urban Spaces*, Whyte and his team of researchers investigated usage patterns of streets and public plazas to evaluate the New York City Planning Commission's zoning code, which allowed for additional density in exchange for developer-provided public plazas. This research was novel in its method of using time-lapse photography across long periods of time in order to isolate trends. Whyte, an urban sociologist, was able to provide through this research empirical evidence of the anecdotal trends discussed by Jane Jacobs related to the social dynamics of public spaces. Like Jacobs, Whyte's approach was inherently focused on bottom-up planning. Whyte had a keen interest in how people used diverse public environments in terms of site popularity, usage trends, and the types of activities present. His methods allowed for detailed observation of individual behaviors and larger patterns examined across a variety of sites, considering how public space design influenced the quantity and quality of usage. His research was successfully used to bridge the gap between small-level behavior and larger land use policies citywide.

Whyte found that the presence of public space alone was not enough to encourage use. Instead, there needed to be a human-scaled attention paid toward design elements that would help foster vibrant public spaces. He found that people would use spaces only if they were perceived to be comfortable, easy to use, and appealing. Through his observation methods, Whyte was able to identify a number of features of public space

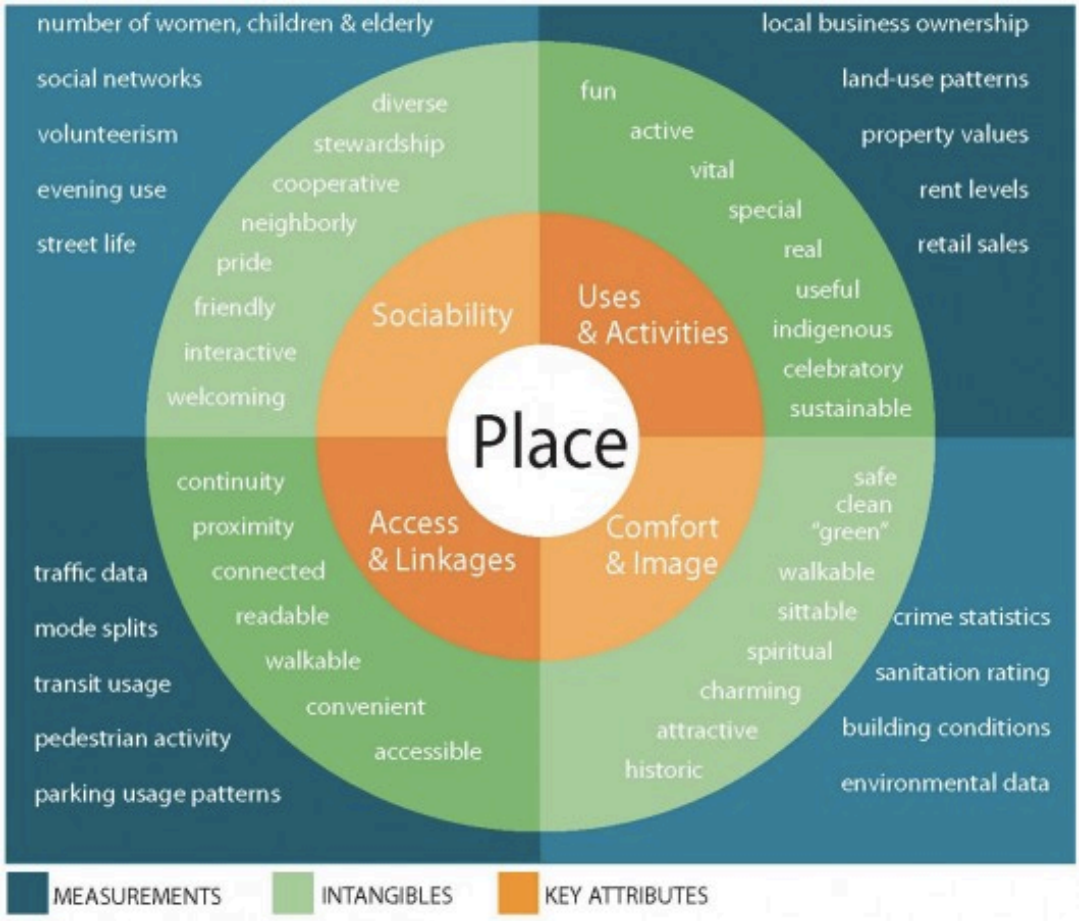
that attracted more use, including: sittable space; moveable seating to allow users a sense of choice for a socially and physically comfortable place to sit; connections between the public place and nearby street for passerby visibility; opportunities for people watching; access to food and beverages; and nearby shade and trees to allow for climatic comfort. Whyte also addressed the topic of “undesirables”—namely, the homeless—by stating that design attempts to keep out certain types of people in make the spaces less hospitable overall and less attractive to all people. In this sense, in order to be used, successful, and vibrant, their design must facilitate inclusive access and accommodate all users. To mitigate concerns for nuisance behaviors, such as public drinking, he felt it is more effective to have active, present stewardship from some individual to dissuade socially detrimental behavior.

The results of the study found that spaces that facilitated interaction between individuals and social use were also more diverse, vibrant, and dynamic public spaces. He emphasized the importance of spontaneous interaction among strangers as an indicator of a healthy public space, and how many times a third element was required in order to facilitate this interaction. This concept of “triangulation” thus underscores the importance of activity and activation of public spaces in order to bring about the external stimuli that allow people to interact with others they might not otherwise. Whyte believed that the sociability of public spaces was the most critical element of all, because it speaks to the overall quality of the space. Whyte’s stance was that it is society’s moral responsibility to build spaces that allow for community engagement and social interaction, and this must be considered on the level of urban design.

Many of the concepts he outlined can be considered universal depictions of factors influencing the use of public space. For instance, it is hard to deny that people are attracted to places with ample sun, trees, water features, and food options. That said, Whyte's conception of what was a "small" urban space were corporate plazas that occupy most of a New York City block. An intriguing test of these concepts is to see if they apply outside of that specific context. An even smaller urban space—the parklet—presents an opportunity to see if curb-side platforms consisting of only a few hundred square feet of public space exhibit these same elements and factors.

Inspired by William H. Whyte, the Project for Public Spaces has, since 1975, been carrying the torch for advocating for the support of public places and placemaking activities in general. Based on their work around the world assessing public spaces, the Project for Public Spaces has outlined their theory of public space by identifying the central qualities that that influence the success of spaces, grouped in four categories: comfort, access, uses, and sociability ("What Makes a Successful Place?," n.d.). These categories, along with their associated intangible qualities, and forms of measurement are shown in Figure 2 below, which the Project for Public Spaces provides to the public, along with detailed questions for consideration, to help communities judge the successes or shortcomings of their own spaces.

Figure 2. The Place Diagram Created by Project for Public Places (“What Makes a Successful Place?,” n.d.)



JAN GEHL

Jan Gehl is another central figure in researching and theorizing about the health and social dynamics of public spaces. Over the last 45 years, Gehl has been a leading mind and a brand unto himself in the field of planning and architecture for documentation of city dwellers’ everyday life. Gehl’s focus has been on the public realm—including how buildings influence their surrounding spaces and how public life is experienced as a result—and has advocated for urban design that takes into account the human, pedestrian dimension. For decades he has worked with cities around the world to study

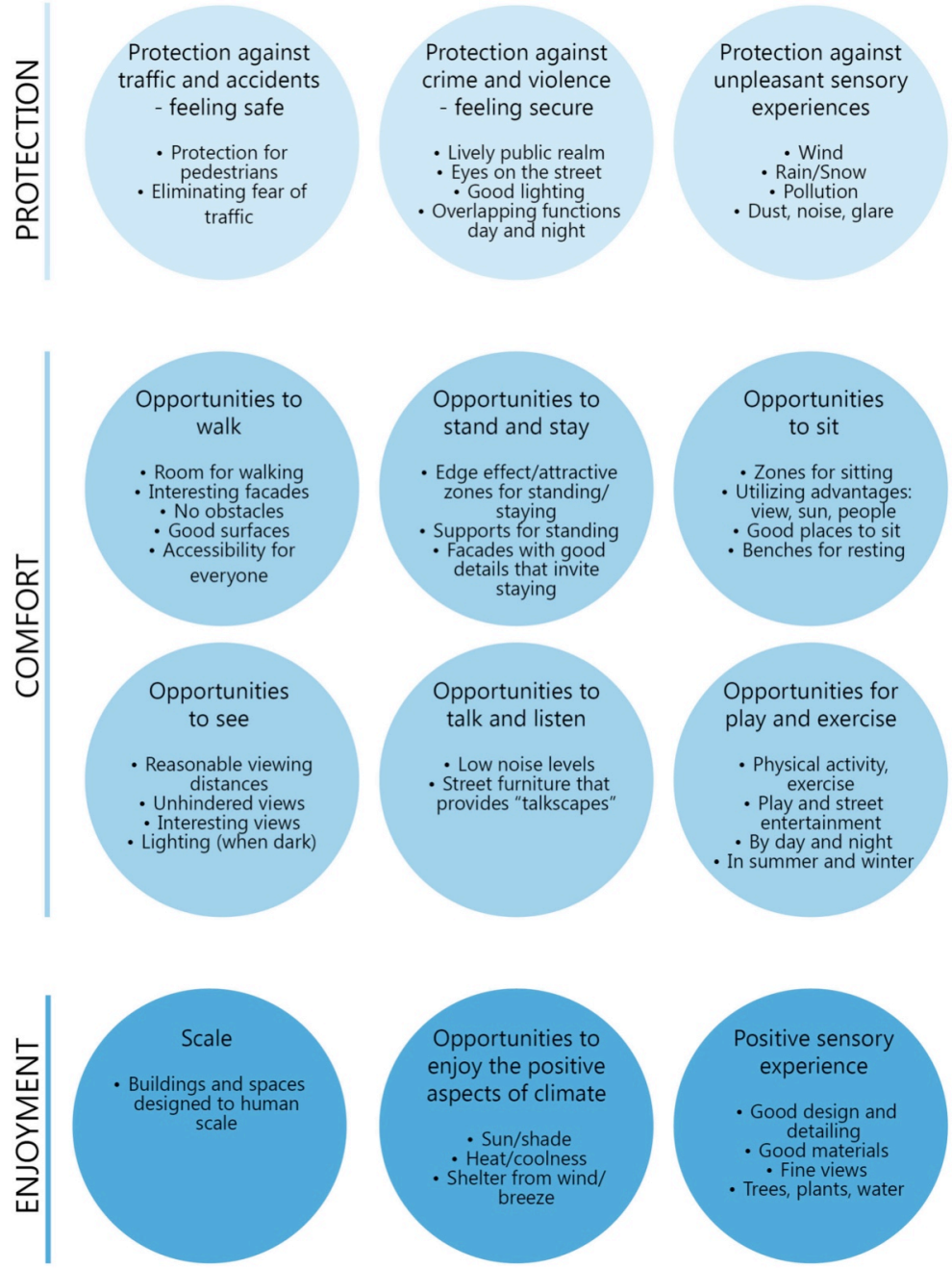
how public spaces can be made to be more pedestrian friendly and livable. In 1971, his first book, *Life Between Buildings*, explored the differences between types of outdoor activities: necessary, optional, and social. Necessary activities are those that are compulsory and occur regardless of the quality or character of physical surroundings. Optional activities occur only "under favorable exterior conditions" and require physical surroundings to be inviting (Gehl, 2011, p. 11). Linked to both necessary and optional activities, social activities are resultant activities that involve interaction with other people, whether active (e.g., talking with others) or passive (e.g., seeing or hearing others). In essence, this typology of outdoor activities is used as a way of evaluating the quality of public space; if optional or social activities occur, conditions must be favorable and the environment must be perceived as appealing enough to facilitate these behaviors. Like Whyte, Gehl believed that social activities were critical to a healthy public realm. Although Gehl recognized that social activities occur even in poor quality environments, he contended that when the quality of the environment increases, so does the likelihood of low-intensity social contact, such as chance contacts or interactions among acquaintances.

In *New City Life* (2006), Gehl along with his co-author, develops a theory about the character of public life over the past century, particularly in post-industrial, first world countries. Specifically, the book describes the transition from an era where many necessary, work-related activities occurred on city streets to contemporary society of "elective city life of leisure and consumer society" where the exchange of goods and information has moved largely indoors (Gehl & Gemzoe, 2006, p. 8). They posit that urban recreation—a new term for Gehl's existing conception of optional activities—have become more prominent over time, as necessary activities in the public realm have

diminished. This evolution of the use of public space underscores the importance of good urban design that facilitates desirable activities and encourages use, particularly for recreational and social purposes. This presents an interesting understanding of the economic role of streets over time: while once critical for the daily comings and goings of society in the industrial age, today urban streets serve a number of economic roles. For instance, streateries signal this shift in use of right-of-way by extending private space for restaurants and bars into public space for the use exclusively by their patrons in an effort to bring pedestrian activity to the streets; in this sense, the right-of-way now serves a direct function for the service industry economy of post-industrial cities.

Building on some concepts originally put forth in *Life Between Buildings*, Gehl more fully developed his understanding of the external conditions that result in physically, psychologically, and socially healthy places in *Cities for People,* published in 2010. Gehl's 12 Quality Criteria for Public Spaces (Figure 3) represents the culmination of his observational research approach. These criteria are split into three main topics: (1) protection: mitigation of conditions imposing risk, physical injury, or insecurity, (2) comfort: inviting environment to facilitate optional and social activities, and (3) enjoyment: high quality public space that provides pleasant sensory and aesthetic experiences. Although Gehl contends that all 12 criteria should be considered when evaluating public spaces, they proceed hierarchically; in other words, the protection criteria must be first addressed before comfort criteria can be considered fully, and comfort criteria must be addressed before enjoyment criteria can be truly realized.

Figure 3. Jan Gehl's 12 Quality Criteria for Public Spaces Adapted from *Cities For People* (Gehl, 2010)



In *Cities for People*, Gehl also explores the concept of "soft edges," which is particularly critical for consideration in the parklet context. He contends that "the treatment of the city's edges, particularly the lower floors of buildings, has a decisive influence on life in

city space" (Gehl, 2010, p. 75). The area where public space meets building on the sidewalk and immediate vicinity is critically important for enlivening the public realm because it serves as the "exchange zone" where public and private life meet (Gehl, 2010, p. 240). In an effort to characterize and classify the characteristics of these soft edge zones, Gehl established five classes of ground-floor design (shown in Table 1), ranging from "active" (small units, many doors, large variation in function, good details and materials, etc.) to "inactive" (large units, few or no doors, blind or passive units, uniform façades). This classification system is a tool for comparing across blocks, districts, and cities, so that these areas can be consistently classified. The closer toward the "active" classification, the more amenable the street is to causal pedestrian activity.

Table 1. Gehl's Ground Floor Design Classification (Gehl, 2010, p. 240)

CLASSIFICATION	DESCRIPTION	NUMBER OF DOORS PER 100 METERS	VARIATION IN FUNCTION	BLIND AND PASSIVE UNITS
A – Active	Small units, many doors	15 - 20	Large variation	None
B – Friendly	Relatively small units	10 - 14	Some variation	Few
C – Mixture	Large and small units	6 - 10	Modest variation	Some
D - Boring	Large units, few doors	2 - 5	Almost no variation	Many
E - Inactive	Large units, few or no doors	0 - 2	No visible variation	All

Gehl exhorts the importance of focusing on these edges so that activity can spill out from establishments into the sidewalks. Through urban design, edges can create opportunities for staying, which not only enliven streets but also maximize the economic potential of businesses. By developing public spaces directly outside of business entrances, outdoor and indoor activity can be linked. Parklets are uniquely poised to provide this service to

cities, and can be seen as tools for activating the edges between private and public life. Parklets should be assessed on their ability to create soft edges in pedestrian environments. Although Gehl does not ever directly address parklets in his writings, I imagine he would emphasize that they should be sited where they can maximize their potential in this soft edge role, and that the design character of the surrounding block face is an undeniable variable affecting usage.

In 2013, Jan Gehl and Birgette Svarre published *How to Study Public Life*, which outlines the conceptual framework, key research questions, and central methodological tools used by Gehl for conducting public life studies. Gehl's approach derives an assessment of the quality of the environment based on activities present. The authors provide a clear discussion of the types of data that can be collected through observation that can illuminate the quality of public spaces, including: (1) "how many": the sheer number of people doing something, (2) "who": the types of people doing something (e.g., gender, age), (3) "where": where use occurs within any given space, (4) "what": what activities are occurring, and (5) "how long": the duration of these activities and visits, which for Gehl, is the key indicator of quality. These key data points are heavily relied upon in this project.

EXISTING PARKLET STUDIES

Although a somewhat nascent pursuit, there is a growing body of research on parklets, with a substantial number of reports released within the past two years. A variety of groups have conducted this type of research, including municipalities, academics, students, business development districts, metropolitan planning organizations, and independent research non-profits. These studies have focused on providing cities data to inform decision-making about parklet programs, drawing heavily from the conceptual frameworks and methodological approaches of the public life researchers discussed in the previous section.

Table 2 below summarizes the pertinent studies completed on parklets to date in other cities by briefly describing their research objectives, methods, and major findings. Overall, most of the completed parklet studies closely resemble public life studies in their objectives, approaches, and methods, drawing on the scholarship of Whyte and Gehl. In general, these studies typically report on how these spaces are used, user or pedestrian perceptions of these spaces, and their estimated financial impact on businesses. Fitting with this third goal of the research, most of the parklet evaluations are designed to determine if they can be justified from an economic perspective in order to offset the loss of parking, a hot button issue in many urban areas. This concern for parklets functioning as a tool for economic development is something that deviates substantially from what is typical from a public life study perspective.

Table 2. Parklet-Specific Studies Previously Conducted

STUDY NAME AND YEAR	AUTHORS	RESEARCH OBJECTIVES	METHODS	MAJOR FINDINGS
SAN FRANCISCO				
"Divisadero Trial Parklet Impact Report" (2010)	San Francisco Great Streets Project	To analyze the public use and perception of the parklets and how they have impacted local business sales	• Pre- and post-installation • Pedestrian volumes, pedestrian surveys; post-installation study of neighborhood business surveys	Slight increase in pedestrian activity and a more favorable attitude about the neighborhood, post-installation as compared to pre-installation; local businesses had more mixed opinions of the parklets
"Parklet Impact Study" (2011)	San Francisco Great Streets Project	To measure the influence of parklets on pedestrian traffic, streetlife, and nearby businesses	• Pre- and post-installation • Pedestrian counts, stationary activity counts, pedestrian surveys, business surveys	Post-installation, there was a substantial increase (44%) in pedestrian traffic at one location and stationary activity and lingering times increased at all three locations; local businesses held largely positive attitudes about the parklets, but did not report substantial foot traffic changes as a result
"Citywide Assessment of Parklets: Summary of Data Collected for 2014 Public Life Study"	San Francisco Planning Department	"To evaluate the effect of San Francisco's parklets and plazas on street life; and public response to these new types of spaces"	• Post-installation • Pedestrian and cyclist counts; site observations; user intercept surveys; cognitive mapping	Parklet usage did not correlate with pedestrian volume; most parklet users purchased something during their visit; people are largely satisfied with the parklets

"Opportunity Mapping San Francisco Parklets and Plazas" (2014)	San Francisco Planning Department	To understand the spatial distribution and characteristics of existing parklet locations and identify areas to target for program expansion in the future	Geospatial analysis using GIS to map parklet locations in relationship to neighborhoods, bicycling amenities and other factors; identifying gaps in parklet service areas by developing walksheds from existing sites and parkland	Parklet distribution is unequal across neighborhoods and Supervisor Districts; parklets are rarely located along bike facilities, presenting a lost opportunity; parklets should be prioritized for the 17% of the city that is currently not served by open space according to the standards presented in the Comprehensive Plan
"Are Parklets Public? Perceptions of Polk Street Parklets" and "The Public Perception of San Francisco Parklets: Divisadero Cluster" (2014)	Students from University of California Berkeley	To understand if parklets are perceived as public spaces and parklet users consumption behaviors	• Post-installation • Observations of parklet design, user counts and activities; pedestrian counts; intercept surveys of passersby and users; and interviews with parklet sponsors	A majority of respondents understood parklets to be public, but there was still a perceived pressure to purchase something from sponsoring business
LOS ANGELES				
"Reclaiming the Right-of-Way Evaluation Report: An Assessment of the Spring Street Parklets" (2013)	University of California Los Angeles (UCLA) & Parklet Studies	To understand the effects of parklets on surrounding neighborhood	• Pre- and post-installation • Bicycle traffic volumes, pedestrian traffic volumes, pedestrian intercept surveys, activity mapping, and business operator interviews, user intercept surveys (post-installation only)	Highest amounts of activity occured on weekend afternoons; surveys indicated that parklets were perceived as a positive neighborhood amenity

Pre-installation existing conditions reports: Hope Street Parklet; 3272 Motor Avenue Parklet; 3340 Motor Avenue Parklet (2016)	Los Angeles Department of Transportation & People St	To capture the urban context of parklet sites prior to installation as a point of comparison to fully understand project impacts	• Pre-installation • Pedestrian and cyclist counts, stationary activity scans, pedestrian surveys, business operator surveys	
NEW YORK CITY				
"Pilot Program Evaluation Report" (2011)	NYC Department of Transportation	To assess how well parklets were operated and utilized	• Post-installation • Site observations of user activities; surveys of users and operators	Usage was highest during mid-day lunch hours, regardless of site; business operators reported increase sales due to installation
BOSTON				
"Parklet Evaluation Report" (2014)	City of Boston	To assess how well parklets were operated and utilized	• Pre- and post-installation • Pedestrian counts; site observations; parklet user surveys	Parklets contribute to neighborhood vitality and can be improved through design alterations and maintenance
CHICAGO				
"People Spots Impact Study" (2014)	Metropolitan Planning Council	To understand parklets' impact on local businesses	• Post-installation • Site observation; parklet user surveys; surveys with local business and business associations	Parklets brought more foot traffic to business, and improved perceptions of the street in terms of aesthetics, vibrancy, and safety
PHILADELPHIA				
"The Case for Parklets: Measuring the Impact on Sidewalk Vitality and Neighborhood Businesses" (2015)	University City District	To understand: parklets' ability to attract and retain users; the diversity of users and uses; their impact on sales at adjacent businesses; and micro-scale environmental factors contributing to parklet success	• Post-installation • Site observations of six parklets over the course of a day; analysis of local business sales data; site characteristics comparison	Parklet installation corresponded with substantial boost in sales of host businesses; factors affecting usage include building transparency, presence of bicycle lanes, population density, pedestrian volume, and service of food conducive to onsite consumption

As evidenced by the number of studies conducted, San Francisco is a leader in conducting research on parklets, which is fitting considering the expansiveness of their program compared to other cities. Another notable city is Los Angeles, which has launched the People St Program through the Department of Transportation. The People St Program—in association with a parklet-focused research consultancy Parklet Studies—has developed a robust pre- and post-installation methodology for evaluating new public places in the right-of-way, including plazas and parklets. They have only just begun the process of implementing these studies as parklets are being installed, but will undoubtedly be the most comprehensive and methodologically rigorous approach to studying parklets in the coming years. Their methodologies were referenced and adapted for this thesis, as discussed in Chapter 3.

As mentioned above, the City of Seattle Department of Transportation has conducted its own evaluation efforts on its parklets and streateries. In the summer of 2015, staff conducted intercept surveys of pedestrians and parklet users, brief site observations, surveys of surrounding businesses, and surveys of hosting businesses for five parklets. Considering the fact that streateries deviate from parklets by being privatized during the hosting businesses' operating hours, SDOT is evaluating this program with an extra level of scrutiny by collecting feedback from users and passersby on a monthly basis for each site. In total, 112 survey respondents across the parklet and streatery sites were recorded in summer 2015. The existing data, as well as the survey instruments, are incorporated into this study and discussed in more detail in Chapter 3.

SUMMARY

This study builds on the concepts gleaned from the scholarship on public life studies, as well as incorporating the methods used by other cities to assess the usefulness and perceptions of parklets. Ultimately, the key studies discussed in this chapter serve as the conceptual and theoretical framework for the metrics development to measure the success of Seattle's parklets as public spaces, and directly inform the methodology employed, as discussed in the next chapter.

CHAPTER 3: METHODOLOGY

The objectives of this research were (1) to develop criteria for evaluating parklet success by referencing the larger body of scholarship on public space evaluation and through consultation with SDOT staff, (2) to understand Seattle parklet usage and determine each site's success based on criteria established, (3) to analyze the differences between usage across sites, and (4) to hypothesize some likely factors at play that affect each of the parklets' success as a public space. This mixed method research is intended to be a descriptive endeavor in explaining a phenomenon and discussing some of the relevant factors that potentially shape it. The research questions addressed through this project include:

- What are effective criteria for measuring success of parklets?
- What types of criteria have previous studies used to evaluate public space and how could these apply to parklets in Seattle?
- How are each of the eight parklets and two streateries currently being used?
- What specific site characteristics or locational attributes might influence parklet use?

This chapter describes how this study was executed in detail in order to answer the above research questions. It includes descriptions of the overall methodological approach, the development of metrics used for evaluating parklet usage across sites, the development of instruments to be used in the field, the logistics of field research, and the final analysis stage of all primary and secondary data.

METHODOLOGICAL APPROACH

This study utilized a mixed method approach in characterizing the function of parklets as a new typology of public space. The development of metrics for measuring parklet performance was a foundational decision as a way of structuring, analyzing, and interpreting the activities occurring in parklets. Because this study looks beyond a single site, I realized early on it would be critical to measure activity in a way that facilitates comparisons across all sites. Drawing upon the literature on what makes public spaces successful, I developed a comprehensive list of metrics that directly measure and characterize parklet usage. I recognized the importance of quantitative data that is collected in a methodologically sound and consistent manner in order to make any conclusions across sites. As such, the use of metrics was the central component of structuring the entire data collection and analysis process.

Ultimately, the central question of this project's inquiry—how are these spaces being used and how can their function be characterized?—is rooted in the need for entirely new information. Site observation was the only viable method of collecting the information related to usage included in the metrics. I designed the study to result in both qualitative and quantitative data to document how the spaces are being used through direct, on-the-ground observation. Using the methodological approach defined by John Ziesel—a prominent author on observing environmental behavior—I designed a research approach to systematically watch people in the parklet environment, with an eye toward who they are, what activities they are engaged in, how they interact with others spatially, as well as how the parklet environment "supports or interferes with behaviors taking place within it, especially the side effects the setting has on relationships between individuals and

groups" (Zeisel, 2006, p. 191). The study design was also directly informed by literature on post occupancy evaluation, due to the fact that this approach also focuses on how spaces are used and what environmental factors seem to facilitate use. As described by Clare Cooper Marcus and Carolyn Francis, a post occupancy evaluation utilizes many research methods in order to provide a multidimensional understanding of patterns of use and non-use within studied areas (Marcus & Francis, 2003, p. 348). A comprehensive post occupancy evaluation typically includes activity mapping, observations of users, and sensory note-taking as a participant observer.

As a supplemental element to this research, I used the existing parklet user and pedestrian intercept surveys first developed in summer 2015 (Appendix D) to collect feedback about each parklet in order to make this dataset more robust with additional respondents. These surveys asked questions concerning: where the respondent lives; what form of transportation the respondent used to arrive at the parklet location; reasons for being at the parklet location; number of times the respondent has used the parklet; the amount of time typically spent at the parklet; and a number of opinion questions related to the parklet's impact on sense of community character identity, impact on sense of safety, cleanliness and maintenance, and usefulness in providing public space. A separate survey was developed for streateries, with a few differences related to the impact the streatery has on the respondent's patronage of the business.

Although the metrics were important, I also did not abandon the effort to capture anecdotes and more qualitative elements of the functioning of these spaces, which could be used to illustrate the trends found in the quantitative metrics data. These observational data were supplemented by the surveys of passing pedestrians and parklet

users, as well as site context data to create a well-rounded understanding of each site individually. The analysis of these different pieces resulted in not only a profile of usage, user opinion, and surrounding site context for each parklet, but also some qualitative hypotheses related to what factors influence usage.

It is important to note that this research does not intend to make any causal declarations as to what makes one parklet more successful than any other. Ultimately, it is impossible to isolate a single variable that drives the use and success of these spaces. How each of these spaces functions as a public space could be due to a wide variety of complex factors, such as: climatic conditions (e.g., exposure to sun, protection from wind); design of the space; local workforce and resident demand for public space; level of community coherence or identity; sense of safety of street; vibrancy of local pedestrian environment; and type of sponsoring business, among a number of other influences. That said, this observational research, in addition to the survey data and secondary data analysis, identified trends patterns of use and suggested potential factors that shape the character of parklet use.

DEVELOPMENT OF METRICS

The previous chapter's literature review discussed common methods for evaluating public space for quality and studying public life. Through this review process, I identified some typical characteristics that can be ascertained through direct observation of public spaces for inclusion in this study to analyze parklet usage. Those characteristics of public space that had a documented relationship to the success of these spaces were prioritized. These concepts were then operationalized in order to be measured, with the idea that these data points could serve as indicators of success to be analyzed across

sites. These metrics were finalized in cooperation with Seattle Department of Transportation staff during a meeting on February 23, 2016. The final list of metrics used to evaluate parklets is included in Table 3 below. The metrics are split into four main categories: Use, User Diversity, Activity, and Site Sociability.

The Use category relates to the most basic metrics of use, such as total number of users, number of distinct users per hour, and amount of time spent in parklet, among many others shown in Table 3. The theory behind these metrics is that in order to be considered successful, parklets must first and foremost be used. Use alone implies that the space serves some function, whether a basic physical need (e.g., a place to rest), a social need (e.g., a place to talk to others or people watch), or a completely recreational need (e.g., place to enjoy the outdoors).

The User Diversity category of metrics speaks to the concern of *who* these spaces serve. The theory behind this subset of metrics is that in order to be considered a successful public space, a parklet must be accessible to all segments of the population. User diversity is important so that the space can serve those from all physical abilities, ages, genders, ethnicities, income levels, and social status. In fact, gender proportion has been widely used as a direct indicator of the perception of the safety of a space, since females are more discerning than males in their public behavior and are less likely to linger in a space that appears to present risk of bodily harm (Whyte, 2010). The data collected in the User Diversity category were compared to the demographics of the surrounding residential community to determine if parklet users were representative of the larger population.

The Activity category of metrics intends to understand the diversity of activities parklets allow for, as well as the character of these activities. Particular attention was paid to activities that can be accommodated between different groups sharing the same parklet at the same time. These metrics also intend to measure the prevalence of optional and social activities in parklets, since Gehl understands these particular public behaviors as direct indicators of quality environments (Gehl, 2011).

Finally, the Site Sociability group of metrics focuses on measuring the extent to which parklets are a setting for social activity of a number of types, including planned meetings and organic interactions. The literature underscores the fact that public spaces serve a critical function of providing a setting for chance meeting and casual gathering, which in theory results in an increased degree of social cohesion, integration, and sense of community for society as a whole. Particular attention was also paid to how different groups share the same space, and if shared use of the parklet, and its relatively small confines, inspires social interaction that might otherwise not occur.

Table 3. Metrics for Evaluating Parklet Site Usage

METRIC		RATIONALE & IMPLICATIONS	LITERATURE SUPPORT
Category: Use			
1	Total number of users	To be considered a successful public space, it must be used. Use can imply positive emotional and/or cognitive responses to a setting. Use implies that the space is functional in that it is meeting a need for user. Need can range from basic physical needs (e.g., a place to sit and rest), social needs (e.g., a place to talk or people watch), to fulfilling need for sensual/aesthetic experience (e.g., a place to enjoy outdoors).	Mike Francis - "Mixed Life Places"; Ken Worpole "Convivial Spaces"; Kathy Madden - "Placemaking in Urban Design"; Jan Gehl - "Life Between Buildings"; Jan Gehl - "How to Study Public Life"
2	Occupancy Score		
3	Total number of use-minutes		
4	Ratio of use-minutes to total time surveyed		
5	Average number of new users per hour		
6	Minimum number of new users per hour		
7	Maximum number of new users per hour		
8	Maximum number of *users* at one time		
9	Maximum number of *groups* at one time		
10	Percent of time parklet is in use		
11	Percent of time parklet is in use when hosting business is open		
12	Percent of time parklet is in use when hosting business is closed		
13	Raito of average number of users compared to surrounding residential density		
14	Percent of passersby that use the space		
15	Maximum percentage of total seating capacity occupied		
16	Ratio of Occupancy Score to seating capacity		
17	Occupancy Score per 100 sqft of parklet space		
18	Median amount of time spent at parklet per user (minutes)	The length of stay directly indicates the quality of the setting. "A good city is like a good party: guests stay because they are enjoying themselves."-Jan Gehl	Jan Gehl - "Life Between Buildings"; Jan Gehl - "How to Study Public Life"
19	Average amount of time spent at parklet per user (minutes)		
20	Median amount of time spent at parklet per group (minutes)		
21	Average amount of time spent at parklet per group (minutes)		
22	Maximum amount of time spent at the parklet		
23	Minimum amount of time spent at the parklet		

METRIC		RATIONALE & IMPLICATIONS	LITERATURE SUPPORT
Category: User Diversity			
24	Percent of users over 65 years old	In order to be considered a successful public space, it must be accessible to all segments of the population. User diversity is important so that the space can serve those from all physical abilities, ages, genders, ethnicities, income levels, and social status.	Ali Madanipour - "Whose Public Space?"; Clare Cooper Marcus & Carolyn Francis - "People Places: Design Guidelines for Urban Open Space"; Jan Gehl - "How to Study Public Life"; Mike Francis - "Mixed Life Places"; Henry Shaftoe - "Convivial Urban Spaces"
25	Percent of users under 18 years old		
26	Percent of users who are female		
27	Percent of users who are non-white		
28a	Percent Black		
28b	Percent Asian		
28c	Percent Latino		
29	Percent of users who have mobility challenges		
Category: Activity			
30	Percent of users who sit	"Sittability" of space is important indicator of quality setting.	William H Whyte - "The Social Life of Small Urban Spaces"; Carmona et al "Public Places Urban Spaces"; Henry Shaftoe - "Convivial Urban Spaces"
31	Percent of users who face outward toward sidewalk	User orientation within the space is indication of how connected the space is to the adjacent sidewalk.	
32	Percent of users who face inward in parklet		
33	Percent of users who face outward toward the street		
34	Percent of users who eat or drink in the space	Ability to eat or drink in public space is key motivation for use.	William H Whyte - "The Social Life of Small Urban Spaces"; Henry Shaftoe - "Convivial Urban Spaces"
35	Average number of activities per group	Public spaces should foster a diversity of uses and activities.	Mike Francis - "Mixed Life Places"; Jan Gehl - "Life Between Buildings"; Henry Shaftoe - "Convivial Urban Spaces"
36	Percent of users who generate trash who dispose of own trash	Stewardship of the space can point to individual connectedness to the space, or a sense of ownership/pride.	Carmona et al "Public Places Urban Spaces"

METRIC		RATIONALE & IMPLICATIONS	LITERATURE SUPPORT
37	Percentage of users who purchase something from hosting business	One of the goals of the program is economic development by encouraging patronage of the hosting business and other local businesses.	City of Seattle Parklet Program goals
38	Percentage of uses who purchase something from block		
39	Percentage of users who either purchase something from hosting business or business on block		
40a	Average length of stay of those who purchase something from hosting business (minutes)		
40b	Difference from overall average length of stay		
41	Percent of users engaged in people watching	People watching is a key function of public spaces.	William H Whyte - "The Social Life of Small Urban Spaces"
42	Percent of users engaged in nuisance behaviors (e.g., smoking, intoxicated, sleeping, panhandling, littering)	Nuisance behaviors would affect other users' ability or desire to use the space; attention should be paid to how others interact with these activities.	William H Whyte - "The Social Life of Small Urban Spaces"
	Percent breakdown of other activities		Jan Gehl - "Life Between Buildings"; Mike Francis - "Mixed Life Places"; William H Whyte - "The Social Life of Small Urban Spaces"
43a	Eating/Drinking		
43b	Hanging out		
43c	Using electronics		
43d	Reading/Writing		
43e	Talking on the Phone		
	Percentage breakdown of other postures		Jan Gehl - "Life Between Buildings"; Mike Francis - "Mixed Life Places"; William H Whyte - "The Social Life of Small Urban Spaces"
44a	Sitting formally		
44b	Sitting informally		
44c	Standing		
44d	Leaning		
44e	Lying down		

METRIC		RATIONALE & IMPLICATIONS	LITERATURE SUPPORT
Category: Site Sociability			
45	Percent of users engaged in social activity: total	Social activity of any sort is indicator of a quality environment.	Jan Gehl - "Life Between Buildings"; William H Whyte - "The Social Life of Small Urban Spaces"
46	Percent of users engaged in social activity: people arriving together		
47	Percent of users engaged in social activity: people meeting up with others		
48	Percent of users engaged in social activity: strangers interacting		
49	Percent of users engaged in *passive* social activities/open behaviors (e.g., hanging out, people watching)		
50	Percent of users engaged in solitary activity/closed behaviors (e.g., using electronics, reading/writing, talking on phone)		
51	Average group size		
52	Percent of *total time observed* that the parklet is occupied by more than one person interacting with each other	Sharing space has potential to result in organic social interactions. Public space as place where we can confront differences. Public spaces serve a critical function for providing a setting for chance meeting and casual gathering. Results in social cohesion, integration, and sense of community.	Jan Gehl - "Life Between Buildings"; Margaret Kohn - "Political Theory and Urban Design"; Jane Jacobs - "The Death and Life of Great American Cities"
53	Percent of *time in use* that the parklet is occupied by more than one person interacting with each other		
54	Percent of *total time observed* that multiple groups share the parklet		
55	Percent of time in use that multiple groups share the parklet		

INSTRUMENT DEVELOPMENT

In order to collect data that would be applicable to the established metrics for understanding and comparing parklet usage across sites, I developed a set of instruments to be used in the field, including (1) a site observation form, (2) a stationary activity mapping form, and (3) a pedestrian count tally form.

First, the site observation form (Appendix A) was developed in order to have a structured instrument from which all observation notes could be made. I intended to develop categories for describing parklet users' demographic backgrounds and activities while in the field. In an effort to make the data collection as consistent and objective as possible and to leave little room for interpretation in the category meanings, behavior categories were clearly defined before going into the field, so that the activities were precisely described and categorized across all users and sites. A structured instrument ensured that all aspects of the users' visit to the parklet were considered in order to accurately report on the metrics; it provided an easy framework from which to document activity, rather then relying on memory to recall all important elements of activity to consider and document. This form was designed to document each user's arrival and departure times, demographic information, postures, and the activities they engaged in while in the parklet. Recognizing that documenting demographic information (e.g., gender, race/ethnicity, age) through observation alone is inherently inaccurate to some degree, I opted to at least attempt categorizing users in an effort to provide a glimpse into user diversity, which is the only way to understand the inclusiveness of these public spaces.

This type of data collection instrument was modeled off of a 2014 study conducted in San Francisco (Panganiban & Abad Ocubillo, 2014), and first piloted by SDOT during the site observations associated with the parklet research in summer 2015. Based on past experience working with this type of site observation instrument, I designed this form to capture more specific, detailed, focused elements of parklet usage of interest to this study in particular, such as purchasing behavior related to the hosting business, arrival and departure time, and the character of observed social interactions.

Second, the activity mapping form (Appendix B) was developed to complement the site observation form, with a focus on where within the parklet activities occurred, and how users typically oriented themselves. This form was developed by referencing the materials created by SDOT during a pedestrian street pilot project in summer 2015, in which stationary activity was mapped, using symbols to represent different postures, such as sitting, standing, and leaning. This form built on this approach by also including a place for me to document which direction the user faced for the majority of their stay (e.g., toward the sidewalk, toward the street, toward the interior of the parklet). Although sometimes orientation was predetermined by fixed seating elements, I used this form to understand where people choose to sit and what to look at within the parklet space, given a choice of diverse seating elements or movable seating elements. Since the same form was used throughout the day, with users cycling in and out, tally marks near the symbol were used to document if multiple used a particular piece of furniture.

Third, the pedestrian count tally form (Appendix C) was used to organize pedestrian counts on the sidewalk directly adjacent the parklet. Pedestrian counts measured the pedestrian activity on the block, to allow for usage comparisons across sites while accounting for differences in each site's local pedestrian vibrancy. These counts were documented for 10-minute samples of times three times an hour while in the field. Using Gehl's method of pedestrian counts, these samples of time were extrapolated to develop hourly pedestrian counts (Gehl & Svarre, 2013).

PRIMARY DATA COLLECTION

In total, seven parklets and two streateries were included in this research. These parklets and streateries are distributed across the city, both within the downtown core, as well as

outlying neighborhoods. One parklet, the Chinatown/International District parklet, was removed from the study because of its current maintenance status. As of March 2016, the host had not been actively supplying the parklet's furniture (e.g., tables, chairs) in order for it to be a usable space for the community. Since this parklet's design consists of a simple, raised platform structure with no built-in seating, there is no place to sit or rest with the furniture not regularly put out. As such, it was removed from consideration from this study since it is not currently operating as originally intended and does not support meaningful stationary activity.

In terms of determining when to collect data for each of the parklets, I referenced the People St Project Evaluation Manual developed by the Los Angeles Department of Transportation (LADOT) ("People St Project Evaluation Manual," n.d.). This document outlines a comprehensive methodology for evaluating public spaces (e.g., plazas, parklets, bike corrals, corridors) both pre- and post-installation, including appropriate study area boundaries, timeframes for data collection, and specific data points that can be collected. It recommends all-day observation on both a weekend and weekday for each site. In order to balance the need for in-depth data and also attempting to minimize the burden of being in the field all day, data were collected between 11:00am through 7:00pm at each site for both a weekday and weekend day. This timeframe allowed for capturing stationary activity during peak and off-peak times to understand how these spaces function through the course of the day.[5] Thus, 16 hours of observation were

[5] The LADOT People Street Project Evaluation Manual ("People St Project Evaluation Manual," n.d.) defines peak hours as those times with most use of public spaces: 7-9am, 11am-1pm, and 4-6pm on weekdays, and 11am-1pm on weekends.

collected at each site, with a total of 144 hours across all nine sites. The calendar in Figure 4 below shows when the parklets were studied.

Figure 4. Schedule of Data Collection in March and April 2016

One important aspect of this research to note is the time of year of the study. Most other parklet studies have to date been completed during the periods of largest amount of

use—summer months. The fact that the data for this study was collected in March and April rather than in the middle of summer makes this study more representative of the weather and sunlight patterns experienced year-round in Seattle, and thus a more useful interpretation of the true demand of parklets. That said, I focused efforts to collect data on days with little to no precipitation, and with the most favorable weather possible in this short timeframe for this observational work. Overall, of the thirteen days in the field, nine were sunny and clear, three were partly cloudy, and one was mostly cloudy, with temperatures ranging from 50 to 85 degrees Fahrenheit. Although it was impossible to control for weather conditions across sites due to the data collection being spread out across multiple days, it is fair to say the climatic conditions for each day in the field were consistently pleasant and conducive to stationary activity.

While in the field, I completed the three forms discussed in the "Instrument Development" section above: site observation form, activity mapping form, and pedestrian count form. Additionally, I also documented unstructured observations to capture the cleanliness of the space, amount of seating available, the nuance of social interactions, and the sensory experiences while monitoring the space, such as traffic noise, when the parklet had direct sunlight, and any nearby activities affecting the parklet. For each site, notes about the block were also documented in order to provide a sense of the level of engagement between the private property on the block and activity on the sidewalk, such as number of customer-facing businesses, transparency of building frontage in providing a "soft edge" to the sidewalk, and use of sidewalk cafes (Gehl, 2010, 241).

In addition to collecting site observation data, surveys were conducted on passing pedestrians and parklet users, but only when there was no interference with the natural environment within the parklet or when there was no conflict with collecting all necessary data points related to site observation and pedestrian counts. For instance, when users left the parklet, I would approach them to ask to take the short survey. The 26 surveys collected in the field in March and April across the sites supplement the 111 surveys already completed by SDOT staff since summer 2015. In total, 137 completed surveys were considered in this study.

Considering the limited timeframe for this study, I recruited volunteers to collect data on the Saturday shifts for five of the nine sites. These volunteers—a mix of SDOT staff and University of Washington students—were provided an informational packet to explain the various elements on which they were asked to collected data (Appendix E) and I met one-on-one with the volunteers to discuss each element of the study in person. I took these steps to ensure that all goals, assumptions, definitions, and parameters of the research were made clear so that the study could remain as objective as possible. Volunteers were asked to complete a "observation summary form" (Appendix F) after their four-hour shift in the field, in order to capture some of the more qualitative aspects of the observation that might be missed if using just the forms provided.

SECONDARY DATA COLLECTION

In order to have deeper understanding of each parklet's surrounding context to inform the analysis of its use, the secondary data described in Table 4 was collected.

Table 4. Secondary Data Collected to Inform Analysis

DATA POINT	DATA SOURCE	DESCRIPTION	PURPOSE
Surrounding Social and Physical Context			
Residential Density	2014 American Community Survey (5-year estimate), US Census Bureau	Average number of residents per square mile for census tract in which parklet is located; one parklet was located on the boundary between, so a weighted average was calculated between two census tracts	To understand if parklet usage is related to the concentration of local residents
Demographics	2014 American Community Survey (5-year estimate), US Census Bureau	Gender, age, and race/ethnic profile for census tract in which parklet is located; one parklet was located on the boundary between, so a weighted average was calculated between two census tracts	To understand if parklet users are representative of the local residential community
Local Commute Behaviors	2014 American Community Survey (5-year estimate), US Census Bureau	How local population commutes to work (drive alone v other method)	To understand if parklet usage is related to commute and travel behaviors
Traffic Volumes	SDOT Open Data Portal	Seasonally adjusted traffic volumes by street; two of the nine sites do not have data available	To understand if parklet usage is related to traffic volumes
Site-Level Conditions			
Size of Parklet	Parklet Construction Drawings, SDOT	Square footage of parklet permitted by SDOT	To understand if parklet usage is related to size of parklet
Available Seating in Parklet	Parklet and Construction Drawings, SDOT	In addition to the movable seating noted during site observations, ledges and benches were measured to calculate total seating capacity; Whyte's estimate of 3 linear feet of bench as one seat was used as basis for calculation (Whyte, 2010)	To understand if parklet occupancy is related to amount of seating available
Street and Sidewalk Width	SDOT Street Use Map (staff data)	Width of sidewalk adjacent to parklet	To understand if sidewalk width correlates to parklet usage, as suggested by Philadelphia study (University City District, 2015)

The result of this data collection process was a parklet "profile" for each site, examining the conditions near the site, including density, demographics, and traffic volumes. Unfortunately, it was not possible to gain access to local business retail sales data on a street or neighborhood level, which LADOT's manual recommends because it serves as an indicator of local economic vitality.

ANALYSIS

Once all primary data were collected, user demographics, user postures, user activities, and pedestrian counts were tallied for each site, and the measurements for each of the metrics in Table 3 were calculated. From there, I compared the values of these metrics across parklets to understand performance on a site-by-site basis. These key metrics, along with the qualitative data collected while in the field and the secondary data related to the local built environment context, were considered in the final synthesis and analysis of data.

The analysis relied on a weighted average approach in order to characterize usage over the course of an entire week for the performance metrics. In other words, the weekday and weekend data were weighted based on the number of days of the week for which it was meant to represent. This meant that the weekday figures were weighted to represent five of seven days of the week, and the weekend figures were weighted to represent two of the seven days of the week. This ensures that the weekend averages do not have an outsized influence on the data overall, since although half of all data collected is weekend data, it is intended to represent only a portion of all activity. In the final results table, data are presented based on each day in which data were collected, but weighted average figures were the basis for most analysis and comparison across sites.

In an attempt to identify possible influences on usage, correlations were run to understand the direction and strength of associations between a number of external factors on usage. The metrics used for correlations to characterize parklet usage were occupancy score and percent of time in use—discussed in more depth in Chapter 4—which were considered separately, as well as together using their average. Continuous data that I hypothesized might be related to usage (e.g, residential density, traffic volumes, pedestrian counts, number of customer-facing businesses on block) were correlated to the parklet usage metrics. I recognize that having only nine sites on which to conduct such analyses is not entirely appropriate, so all correlation-related results (Table 8 in Chapter 4) should be considered preliminary and exploratory in nature. Additional data would need to be collected in order to increase accuracy of these findings.

Ultimately, the findings from this research are intended to be hypotheses in and of themselves to hint at what shapes these complex social environments, and what factors, if any, appear to encourage more successful behaviors within the parklet context. The descriptive statistics included in this report, as well as a first attempt to understand statistical associations, should be not be taken as indicative of universal truths related to the usage and performance of these spaces.

LIMITATIONS

Despite best efforts, there are elements of the research methodology that introduced potential sources of inaccuracy into the data collected. Although data were collected using methods as consistent and objective as possible considering the timeframe constraints, it is still important to make these limitations visible to the reader. First, I

was unable to execute all weekday data collection on the most preferable weekdays. LADOT's evaluation manual suggests that all weekday data be collected on Tuesdays or Wednesdays, because they are considered the most representative days for weekday behavior ("People St Project Evaluation Manual," n.d.). However, considering all data had to be collected across nine sites within a month, I took liberties with the weekday collection by including data collection on Mondays, Thursdays, and Fridays. This approach was taken to maximize the number of days in the field with favorable and consistent weather conditions, rather than emphasizing the actual day of the week. All weekend data were successfully collected on Saturdays, as suggested by the LADOT evaluation manual.

Second, as Figure 4 shows, weather did vary by day, and thus results should be interpreted considering the climatic conditions of the day for which data was collected. Unfortunately, since there was only one primary researcher to visit all sites across multiple days, it was simply impossible to control for weather in this study. The original research design called for cameras to be set up for all sites over the course of a week in order to document activity in the same weather conditions. This plan did not come to fruition due to the political and legal circumstances surrounding surveillance of public spaces. However, considering the time of year in the Seattle climate, variation was less than expected, with warm, sunny weather dominating most days in the field.

Third, in order to measure behavior consistently across all sites for comparison purposes, the 11am through 7pm timeframe was used universally across all parklets. Ideally, however, one would want to understand the full-day use cycle of the parklet, and observation hours would vary based on the operating hours of the hosting business. For

instance, three parklets that were sponsored by coffee shops were included in the study; these likely experienced significant usage earlier in the day before 11am, corresponding to their typical clientele. Similarly, the one ice cream shop consistently has patrons well into the night (until closing at 11pm), so parklet usage likely continued past the 7pm cut-off for this research. Results should be interpreted recognizing the fact that the time period used in this study *may not* correspond to peak time for each individual parklet. Future research might focus on capturing peak time periods, which likely vary by site and might fall outside of the 11am through 7pm timeframe.

Finally, there is likely some small level of error due to the fact that multiple individuals conducted field research. Although the primary researcher visited each site on a weekday, half of the weekend data collection was conducted by volunteers due to the compressed timeline of the research. There was an attempt to mitigate errors in having multiple researchers involved in data collection by developing a detailed guide (included in Appendix E) for each data collection form and one-on-one trainings.

SUMMARY

This research used a mixed method approach in collecting data to understand the function of parklets as a new typology of public space. Drawing upon the literature on what makes public spaces successful, I developed a comprehensive list of metrics and corresponding suite of data collection instruments for assessing parklets to allow for across-site comparisons. A lengthy data collection process resulted in a robust set of observation data to characterize the parklet users' demographic background and the typical behaviors and activities exhibited in these spaces. These observational data were supplemented by surveys of passing pedestrians and parklet users, as well as site

context data related to street-level design and business context of the parklets' immediate vicinity to create a well-rounded understanding of each site individually. The analysis of these different pieces resulted in not only a profile of usage, user opinion, and surrounding site context for each parklet, but also some qualitative hypotheses related what factors influence usage. These findings are discussed in detail in the next section.

CHAPTER 4: ANALYSIS & FINDINGS

This chapter highlights the key findings from the research, split into three primary sections: Site Descriptions, Parklet Performance, and Towards a Parklet Assessment. First, the Site Descriptions section describes each of the sites in terms of parklet location, design, interaction with block face, and a synopsis of current usage patterns. This section is meant to be a useful reference for readers when reviewing the remainder of the chapter.

Second, the Parklet Performance section provides cross-site comparisons of the parklets based on the performance metrics developed for this thesis. This section is organized by the topics used for the parklet metrics—parklet usage, user diversity, parklet activities, and sociability of site—as well as analyzing usage based on a number of external factors. A full summary table of results across all metrics can be found in Appendix H.

Third, the chapter concludes with a discussion that synthesizes the findings to characterize the functional life of these spaces based on performance results and qualitative observations. This chapter pulls out the central findings from the large amount of data collected and expands upon their meaning based on reflections from the field.

SITE DESCRIPTIONS

The nine sites observed in this research—all sites included in Figure 5, with the exception of the Chinatown/International District parklet—are briefly described and illustrated in this section, listed in alphabetical order. Photos of their surrounding block faces in the

form of building and sidewalk elevations are included in Appendix G for further illustration.

Figure 5. Map of Parklets and Streateries Constructed as of May 2016

	Name	Date Opened	Neighbor-hood	Adjacent Business	SqFt
1	Montana Bar	Sept 2013	Capitol Hill	Bar	168
2	Chinatown / International District	June 2014	Chinatown/ International District	Bubble tea shop	132
3	Molly Moon's	Sept 2014	Wallingford	Ice cream shop	126
4	Cortona Cafe	Sept 2014	Central District	Coffee shop	483
5	Chromer Building	Dec 2014	Downtown	Restaurant/ bar	718
6	Uptown	Feb 2015	Uptown	Cinema	280
7	Terry Ave	May 2015	Denny Triangle	None	275
8	U District	June 2015	U District	Coffee shop/ news stand	256
9	Some Random Bar	Oct 2015	Belltown	Restaurant	408
10	Tin Umbrella	Nov 2015	Hillman City	Coffee shop	256

CHROMER BUILDING PARKLET

Opened in December 2014, the Chromer Building parklet is Seattle's largest at 718 square feet, and a total of 116 feet long. The Chromer Building parklet's design consists of a long, elevated platform running the length of the Chromer Building mid-block. Due to the parklet's length, and the slight elevation change on the block, the parklet is split into five separate platforms, which are joined into one continuous platform by 36 linear feet

of Informal bench seating. A total of 19 brightly colored and movable chairs, along with tables are present in the space. In the two most southern sections of the parklet, a bar is installed for additional surface space.

A real estate development firm located on the third floor of the Chromer Building, Urban Visions, is the parklet's host, having funded and currently holding the permit to the space. A restaurant/bar located on the street, Elysian Bar, is in the process of converting the southernmost section of the parklet into a streatery in order to provide table service to customers in the space.[6]

[6] During the Saturday observation period, I observed staff serving four customers in this space, even though their permit had not yet gone through. Later on in the chapter, the 2% of users I mention who purchased something from this block are those four customers.

Figure 6. Images of Chromer Building Parklet

Source: Google Maps (top), Seattle Department of Transportation (bottom right), and author's photo (bottom left)

Due to its location in the central business district on 2nd Ave in downtown Seattle, between Pike St and Pine St, the Chromer Building parklet is very centrally located, within a few blocks of many tourist destinations (e.g., Pike Place Market), cultural attractions (e.g., Seattle Art Museum, Benaroya Hall), and the main shopping district. The block on which the parklet is located is less active than many in the surrounding area, due to the fact that there are few customer-facing services. As shown in Figure 31 on page 137, on the north side of the block face, there is a clothing store, and at the southern edge of the parklet there is a restaurant/bar with a fenced-off sidewalk cafe. Two parking lot entrances are located on this block. The Chromer Building itself has

multiple vacancies in its street-level frontage, lessening the amount of activity on the block. The Chromer Building has an entrance to its upper-level offices adjacent to the parklet, but it appears few of the workers use this space, opting to take their breaks by one of the parking lots in order to smoke cigarettes.

Overall, the parklet is well maintained and clean. The Downtown Seattle Association (DSA) maintains the site by watering plants and disposing of trash; in fact, DSA staff were present maintaining the site during both observation periods included in this research. Additionally, the parklet is sited to get moderate sun exposure; during the period of observation, the parklet had direct sunlight exposure between 11am and 2:45pm.

CORTONA CAFÉ PARKLET

Built in September 2014, the Cortona Café parklet is located at the corner of E Union St and 25th Ave and directly outside of the Cortona Café coffee shop, which also has a sidewalk café along its frontage on 25th Ave. The parklet's design consists mostly of fixed and movable seating, along with landscaping, and central sandbox play element that serves double duty as bench seating. In total, there is seating capacity for 9 individuals in the 483 square feet of parklet space. The parklet platform occupies both the roadway and landscape zone of the sidewalk, thus having somewhat deeper dimensions than most parklets.

Figure 7. Images of Cortona Café Parklet

Source: Google Maps (top), author's photos (bottom)

The Cortona Café parklet's surrounding location is the most residential of all sites, although located just two blocks east of the Central District neighborhood commercial area at 23rd Ave and E Union St. On E Union St block face between 24th Ave and 25th Ave, as shown in Figure 32 on page 138, there is also an entrance to condominiums located above the coffee shop, a stationary shop, a by-appointment salon, and marijuana retail store. As of May 2016, construction is wrapping up on a 39-apartment unit mixed use building on the west side of the block face, with a restaurant planned for the ground floor retail space. This change on the block will undoubtedly change parklet usage going forward.

The parklet is sited to receive good sun exposure in the afternoon; during the period of observation, the parklet had direct sunlight exposure between 11am and 5:15pm.

MOLLY MOON'S PARKLET

Located in the Wallingford neighborhood, the Molly Moon's parklet was built in September 2014 outside of an extremely popular local ice cream shop open from 12pm until 11pm daily. This parklet is the smallest of Seattle's parklets, occupying only 126 square feet of curb space. There are no movable seating elements in the parklet, but the design does provide ample opportunity to sit along the parklet ledges or in either two fixed chairs that are fashioned to look and operate like swings, providing a play element to the space. The floor of the parklet is turf, which encourages informal sitting due to its incline in one corner of the parklet. The parklet is well maintained, with a heavily used garbage can directly adjacent to the parklet to collect trash from Molly Moon's customers. It is also sited to experience large amounts of sun exposure; during the period of observation, the parklet had direct sunlight exposure between 11am and 7pm (the entirety of the observation).

Figure 8. Images of Molly Moon's Parklet

Source: Strata Architects (top and bottom right), Seattle Department of Transportation (bottom left)

The street on which the parklet is located—N 45th St—is the main corridor for the Wallingford neighborhood, with significant pedestrian-oriented commercial activity. On the parklet's block face alone, there are seven customer-facing businesses (shown in Figure 33 on page 138). With the exception of a salon and dry cleaners, all of these businesses on the block face are food service related.

MONTANA BAR STREATERY

Montana Bar holds the title for being both the first parklet and streatery host in Seattle. Originally constructed in September 2013 as part of the Parklet Pilot Program, it was

converted to a streatery in June 2015—at the time, the first permitted streatery under the program—so that customers of the hosting business could enjoy the space. The streatery is closed to the public daily between 4pm and 2am, when Montana Bar is open.

Consisting of 168 square feet, the space is split into two main spaces that are physically separated and have separate entrances: one closer to the road that is slighting elevated and the other closer to the sidewalk that matches the elevation of the sidewalk. This design provides some vertical separation between the two spaces, making it a good place for multiple groups to share. The streatery does not have any built-in seating options. Bar stools are brought out into the space during operating hours, but otherwise the streatery sits empty, requiring users to stand or lean in the space. The streatery has ample bar surface space, which is serviceable for placing drinks, but little else. Constructed of wood and wire fencing, with small landscaping features, the streatery is well maintained by the hosting business. During the period of observation, the streatery had direct sunlight exposure between 11am and 3:30pm.

Figure 9. Images of Montana Bar Streatery

Source: Google Maps (top), Seattle Department of Transportation (bottom)

This block of E Olive Way in Capitol Hill has an active restaurant scene, with three bars, one restaurant, and one pastry shop/café, as shown in Figure 34 on page 139. Although there is very limited activity in the streatery when Montana Bar is closed, it is successful in bringing in people who have purchased take-away food from the block, such as the pastry shop next door. This points to the opportunity of permitting streateries where nearby businesses have complementary hours (early morning through mid-day, for instance).

SOME RANDOM BAR STREATERY

The Some Random Bar streatery was the first newly constructed streatery in Seattle, opening in October 2015. This streatery is closed to the public between 4pm-2am on weekdays and 11am-2am on weekends. The streatery design consists of an elevated platform that sits above the sidewalk. It is an enclosed space, with one entrance. The platform entirely envelopes the trunk of an old tree, and the platform itself sits upon a tree pit. The tree, in addition to being a beautiful element of the streatery, also provides some shade to users. There is 17 linear feet of fixed bench seating in the parklet, paired with tables affixed to the ground; this makes Some Random Bar a more functional space during the public hours because there is available seating and surfaces. During operating hours, Some Random Bar staff bring out chairs and stools to be placed in streatery. The space also feels well protected from traffic because the back of the bench is tall, serving as the barrier between the street and the streatery. This site also experiences good sun exposure; during the period of observation, the parklet had direct sunlight exposure between 11am and 5:40pm.

Figure 10. Images of Some Random Bar Streatery

Source: Author's photo (top), Seattle Department of Transportation (bottom)

On this block of 1st Ave in Belltown, there are two customer-facing restaurants in addition to Some Random Bar, both of which bring customer activity to the street by using sidewalk cafes. Also located on the block is a large off-street parking lot with two curb cuts mid-block, which make this block a less inviting space for pedestrians than it would otherwise be.

During both observation periods that coincided with table service in the streatery, the hosting business rolled out two large carts for a bussing and water refill station to be used by their servers. These were placed on the sidewalk adjacent the streatery,

preventing access to a bike rack, thus furthering this private business' encroachment into public space, this time unpermitted.

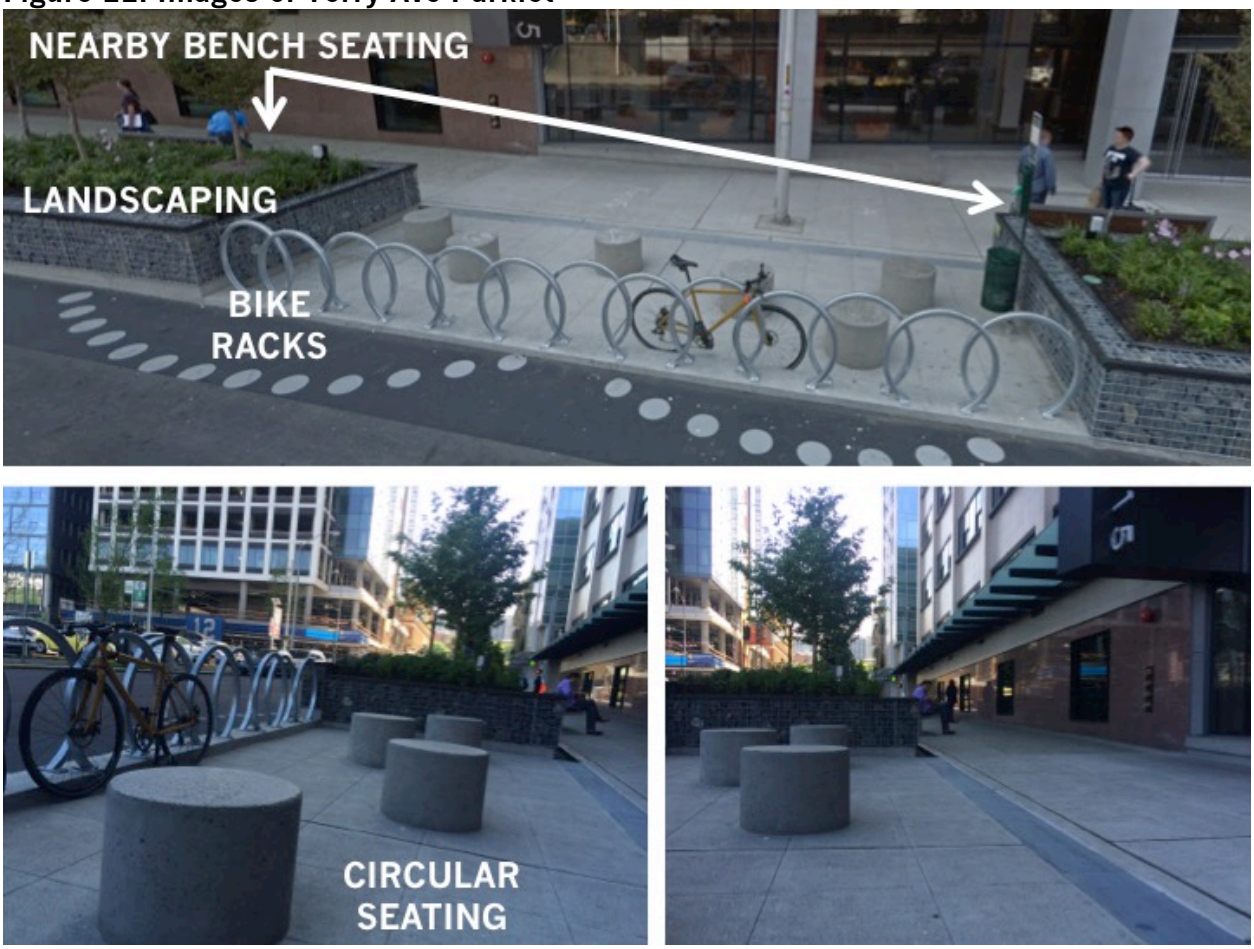
TERRY AVE PARKLET

The Terry Ave parklet is located in the Denny Triangle neighborhood, directly outside the entrance of an office building owned by Seattle Children's Research Institute but currently occupied by Amazon. This office building occupies the entire city block with only one entrance to the building on the block face. There is no customer-facing activity. In fact, while the façade of the office building is transparent with tall windows and well-lit interior in the area adjacent to the parklet, it is entirely uninviting to outsiders due to the high level of security officers present, who appear to be monitoring all activity near the building. The rest of the façade along the length of the block is monotonous and not transparent, exemplifying Gehl's understanding of an uninhabitable street for pedestrians.

The parklet is an attempt to make this street more friendly to pedestrians. The parklet is just one element of a larger street improvement project that was completed in May 2015 and included significant landscaping improvements, a bike share station, and benches. The parklet component itself does not fit the typical mold, in that it is not in fact a temporary installment, but rather is cemented into the roadway. The design consists of fencing that doubles as a bike rack and circular seating elements. Despite these efforts, the parklet has very little sun exposure, thus limiting its attractiveness to passersby. During the period of observation, the parklet had direct sunlight exposure for a very short

amount of time (between 11:00am and 11:15am) due to its location near many tall buildings.

Figure 11. Images of Terry Ave Parklet



Source: Google Maps (top), author's photos (bottom)

The vast majority of users in this space were employees who worked in the adjacent building, with only a few instances of members of the public using the space. The users can be classified into three categories: (1) people walking their dogs and lingering in the parklet, (2) people talking on their phones, and (3) people waiting for others in the adjacent office building, typically using their smartphone while waiting.

TIN UMBRELLA PARKLET

The Tin Umbrella parklet was constructed in November 2016, making it the youngest parklet observed in this research. The hosting business, Tin Umbrella Coffee Roasters, is a single-store local coffee shop that is open seven days a week with weekday hours between 7am and 4pm. A simple, elevated platform structure serves as the base of the parklet, with tiles serving as the floor surface. Some of these tiles have been painted so that the parklet reads “Hillman City Parklet” across the length of the space, creating a charming nod toward placemaking for the neighborhood. A large tree is adjacent to the parklet, with a tree pit running the length of around half of the parklet’s connection to the sidewalk. Moveable furniture fills the space, including six chairs and two tables, which are left for the public to enjoy, even when the hosting business is closed. There is also a built-in bench located at the southern edge of the parklet to allow for more seating.

Figure 12. Image of Tin Umbrella Parklet

Source: Seattle Department of Transportation

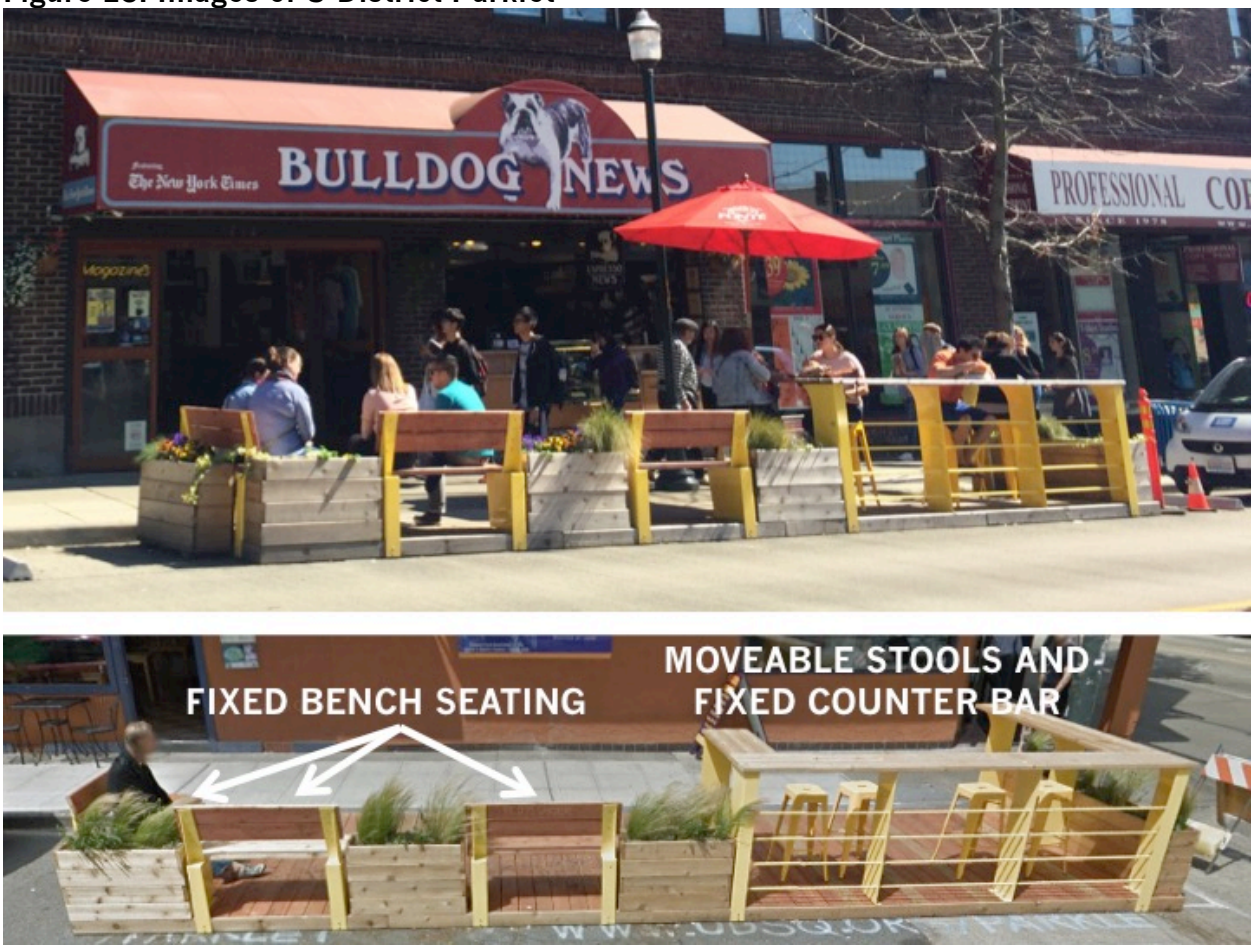
Located in the Hillman City neighborhood, this parklet represents the first project in southeast Seattle, a part of town that is home to large proportions of low-income and minority residents. The block face on which the parklet is located (as shown in Figure 37 on page 141) has five public-facing establishments in addition to the coffee shop, including two retail stores, one salon, one tattoo parlor, and one church; these are all local commercial establishments, with little draw to make them destinations for many people outside of the neighborhood. As such, compared to all other sites, this parklet's block face has very little pedestrian activity, averaging only 34 pedestrians per hour on average.

The parklet is sited to receive excellent sun exposure; during the period of observation, the parklet had direct sunlight exposure between 11am and 7pm (the entirety of the observation). The Tin Umbrella parklet appears to be well maintained by the hosting business.

U DISTRICT PARKLET

The U District parklet is hosted by the U District Square, a local community organization that advocates for more public open space in the University District. U District Square was able to raise money to fund the parklet through crowdfunding and a grant from the Seattle Department of Neighborhoods. Constructed in June 2015, the U District parklet was originally located on NE 43rd Street directly outside of an ice cream shop. However, due to concerns related to a homeless encampment and the hosting business refusing to maintain the space over time, the parklet was moved in December 2015 less than two blocks away to University Way NE. Supporters hoped that by placing the parklet on the central street in the U District adjacent to a business with lots of activity and connection to the sidewalk, more desirable behaviors would be encouraged in the space. Bulldog News is the partnering business that currently hosts and maintains the parklet on behalf of U District Square. Bulldog News is a retail store that sells primarily newspapers and specialty magazines. They also have a café that sells coffee and light food that abuts the sidewalk, linking the indoor and outdoor activity. Bulldog News is open between 8am and 7pm on weekdays.

Figure 13. Images of U District Parklet



Source: Author's photo (top), Google Maps (bottom)

The parklet's design combines a number of seating, surface, and landscaping elements to provide a variety of options for parklet users. The northern half of the parklet consists of three benches that are interspersed with planter boxes, while the southern half has a "U" shaped counter built to a height appropriate for use while standing, as well as moveable stools. During the period of observation, the parklet had direct sunlight exposure between 12:15pm and 4:30pm.

The block face on which the parklet is located is heavily trafficked by pedestrians, more so than any other parklet observed in this study. On average, 763 pedestrians passed the parklet per hour, which was a rate substantially higher than all other sites. The sidewalk

and roadway are also relatively narrow—10 feet and 38 feet, respectively—thus amplifying the sense of frenetic pedestrian activity on the block. This street also had the largest number of customer-facing businesses at the time of observation, shown in Figure 38 on page 141. These 12 establishments included a post office, convenience store, copy shop, and many restaurants.

UPTOWN PARKLET

The Uptown parklet opened in February 2016 outside of the SIFF Cinema Uptown, a local movie theater. While located outside of the movie theater, the parklet itself was initiated by the Uptown Alliance, a non-profit community development organization consisting entirely of volunteers, which fundraised for the project and holds the annual permit and maintenance agreement with the city.

Figure 14. Images of Uptown Parklet

Source: Google Maps (top), Seattle Department of Transportation (bottom left), author's photo (bottom right)

The parklet is constructed mostly of wood, with ample seating opportunities for users in the form of movable chairs and tables, as well as fixed benches that run almost the entire length of the parklet. The fencing on the southern half of the parklet that separates the parklet from the street is designed to imitate film reels, thus relating the space to the adjacent business—a source of neighborhood identity for the Uptown area. During the period of observation, the parklet had direct sunlight exposure between 11am and 3pm.

Overall, the parklet has some challenges related to maintenance, since the adjacent business is not responsible for the ongoing clean up. Trash disposal is a concern for this parklet, as is bird feces from overhead, and drainage under the parklet. Even though the

space was not spotlessly clean during the times observed, it did not entirely prevent people from using it.

As shown in Figure 39 on page 142, the block face on which the parklet is located is an active commercial area, with a variety of customer-facing businesses, including a tanning salon, a coffee shop, and three restaurants. A building is currently under construction at the northern edge of the block face, which will bring 34-units of housing and 16,200 additional square feet of commercial space to the block. Although the block is relatively commercially active with sizable pedestrian activity (195 passing pedestrians on average per hour), the parklet is located directly adjacent to a part of the movie theater that has a blank, brick wall, as shown in Figure 14. The parklet thus serves a limited purpose as a "soft edge" since there is no door directly adjacent to it, even though the block face has many examples of "soft edges," including the movie theater's transparent box office and sidewalk cafes at three other businesses.

PARKLET PERFORMANCE

The following section provides the results of this research split into the four main topics used to organize the performance metrics: parklet usage, user diversity, parklet activities, and sociability of site.

PARKLET USAGE

Table 5 below provides descriptive statistics on parklet usage by site. Sites varied in their overall absolute number of users, ranging from 30 total users (Tin Umbrella) to 249 total users (Molly Moon's) in the 16 hour time period in which each parklet was observed over

the course of a weekday and a Saturday. Usage was heaviest on Saturdays overall when 64% of all users were observed, as compared to weekday activity. The only site that deviated from this trend was Montana Bar, which was substantially busier on the weekday studied.

Table 5. Parklet Usage Descriptive Statistics

SITE	NUMBER OF USERS			DWELL TIME	
	TOTAL	WEEKDAY	WEEKEND	MEAN [a]	MEDIAN
Chromer Building	73	12 (16%)	61 (84%)	10	10
Cortona Café	38	13 (33%)	25 (66%)	8	4
Molly Moon's	249	60 (24%)	189 (76%)	10	9
Montana Bar (S)	104	64 (62%)	40 (38%)	32	14
Some Random Bar (S)	96	31 (32%)	65 (68%)	61	50
Terry Ave	46	22 (48%)	24 (52%)	3	1
Tin Umbrella	30	6 (20%)	24 (80%)	18	8
U District	190	88 (46%)	102 (54%)	10	6
Uptown	41	18 (44%)	23 (56%)	37	7
All Sites	**867**	**314 (36%)**	**553 (64%)**	**18**	**9**

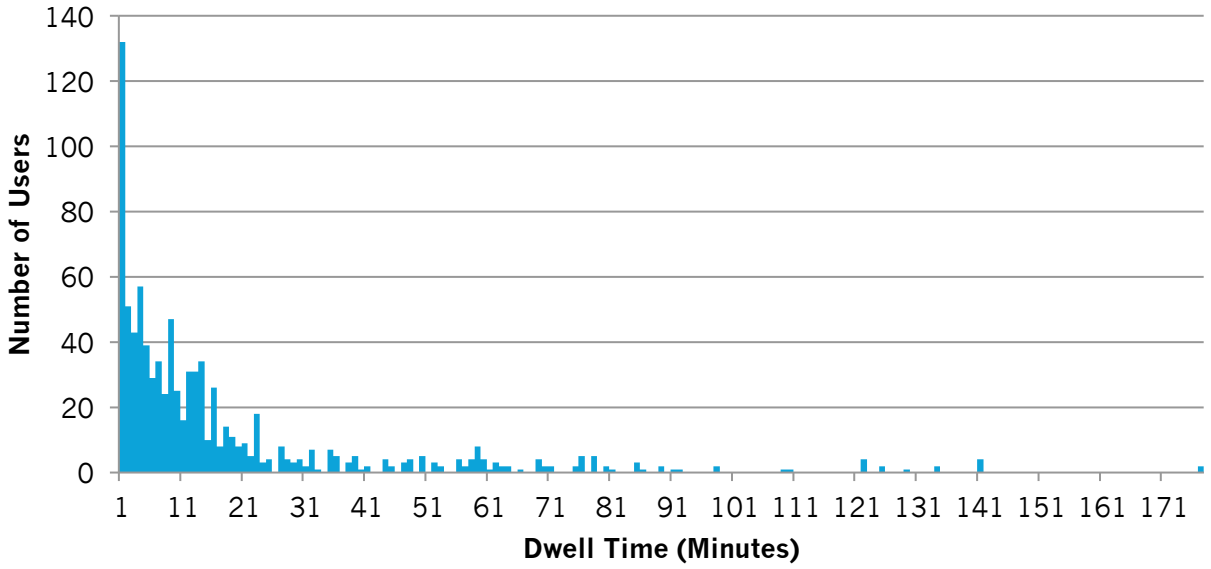
[a]Mean statistic is weighted to reflect usage over the course of an entire week.
(S) Indicates streatery site, allowing for private usage during hosting businesses' operating hours.

In addition to variability in the number of total users, there were substantial differences in how long each visit lasted, with mean dwell times by site ranging from 3 minutes (Terry Ave) to 61 minutes (Some Random Bar), with an average dwell time of 18 minutes across all sites.

Table 5 provides both the average and median dwell time; in some instances, the median statistic is a better figure to use for understanding central tendency, because it dismisses some outlier users.[7] As might be expected based on their function of providing table service to users, the two streateries had the longest dwell times. On the other end of dwell time variabilty, the Terry Ave parklet had very short dwell times, since the vast majority of users stopped briefly but did not spend significant time in the space.

Figure 15 below provides a histogram of dwell time across all sites. In total, 56% of all users stayed in the parklet for 10 minutes or less.

Figure 15. Distribution of Dwell Times for All Parklet Users



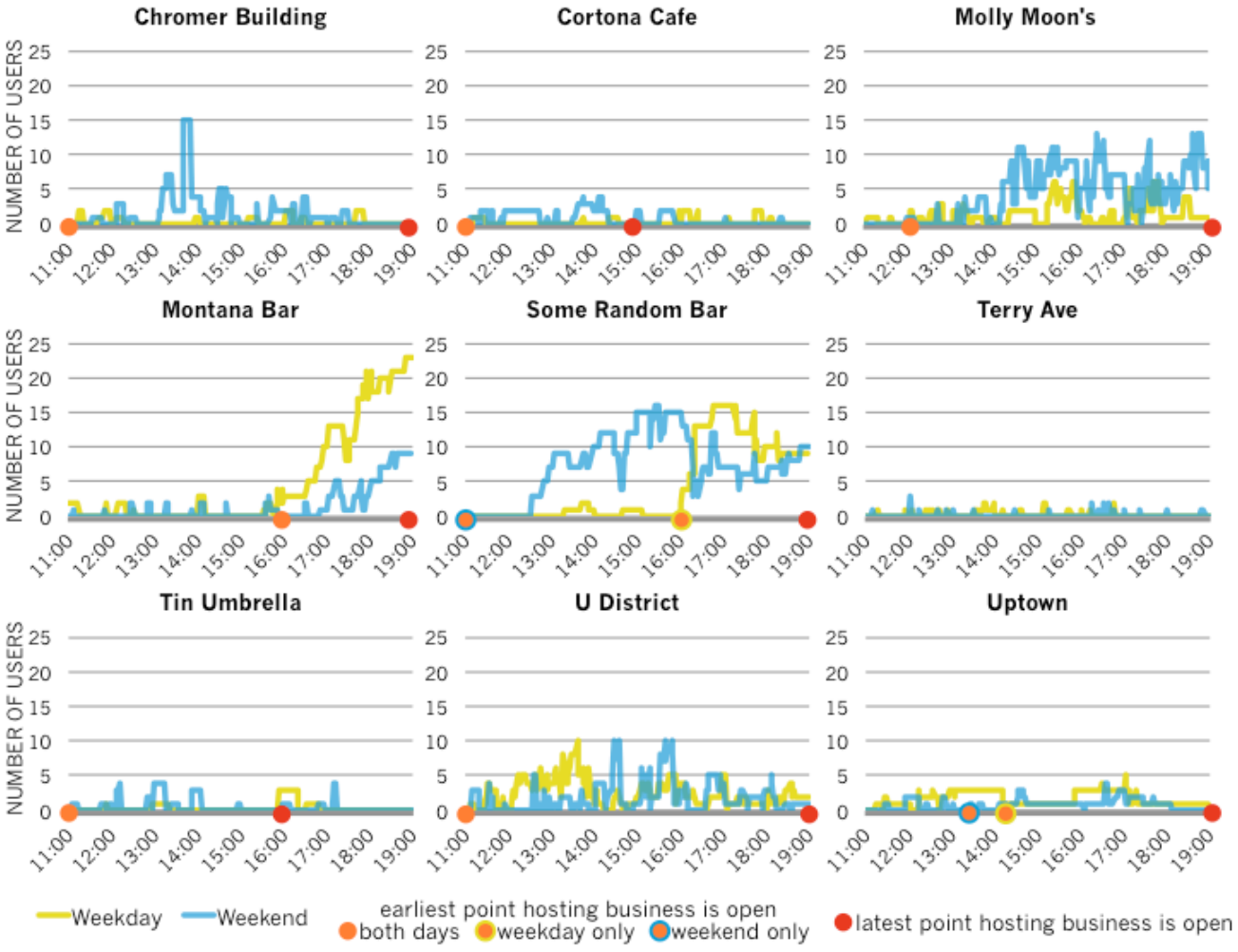
Note: Not included in this histogram is the one extreme outlier user who stayed in the Uptown parklet for 365 minutes total.

[7] For instance, the Uptown parklet had one user who spent over six hours in the parklet. Although noteworthy of inclusion in this study, this one user skews the data when looking exclusively at the average statistic, thus explaining the very wide difference between a mean of 37 minutes and a median of 7 minutes.

Daily Patterns

Each site exhibited its own patterns of usage over the course of the day. Figure 16 provides a graph of number of users between the hours of 11am and 7pm at each site by day of the week. Many of the sites had an even rate of consistent usage across the entirety of the day, while others had more sporadic usage.

Figure 16. Parklet Usage Daily Pattern



The largest changes in usage can be seen at the two streateries: Montana Bar and Some Random Bar. The large increase in users towards the ends of the day corresponds to when the space is open and operated by the hosting business. The orange dots displayed in Figure 16 represent when the businesses opened during the observation period. For Montana Bar, the streatery was in use 93% of the time during their operating hours, as compared to only 19% when Montana Bar was closed. Some Random Bar illustrated the same trend: it was occupied 94% of the time when the business open, compared to only 24% when closed. Unlike the streateries, the remaining parklets did not have such a stark contrast in usage based on if the hosting business was open.

Key Metrics

As the multiple metrics I developed for parklet usage illustrates, there is a wide array of ways to conceptualize and measure parklet usage. No one measurement will tell the whole story because any summary statistic necessarily simplifies larger trends. There are two metrics that when paired together provide a more well-balanced understanding of parklet usage. These key metrics are:

- **Occupancy Score**: measures the number of user minutes (number of users multiplied by length of stay) divided by the total number of minutes observed at the site. This metric takes into account the number of unique users and their dwell times. This metric can be interpreted as the average number of users at any given time.

- **Percent of Time in Use**: measures the proportion of time observed in which at least one person was occupying the space, thus taking into account the temporal diversity of use in the parklet and demand over the course of an entire day.

Figure 17 below provides the site-specific results based on these metrics, illustrating that a site can perform very differently based on how usage is measured. On average across all sites, parklets are occupied 46% of the time, with an occupancy score of 1.8. In total, five of the nine parklets have at least one user on average at any given time (measured by an occupancy score of at least 1.0)[8] and four were occupied at least half of the time observed. The lowest performing parklets on these metrics were Terry Ave, Tin Umbrella, Cortona Cafe, and Chromer Building, which display low levels of usage for both measurements, as is shown by their location in the lower left quadrant in Figure 18. On the other hand, we see that the three other parklets—Molly Moon's, U District, and Uptown[9]—outperform the streateries in terms of percent of time in use, but not for occupancy score. These parklets tend to be occupied the majority of the day by at most a few groups at a time, with a maximum number of users at once ranging between 10 and 15 for these sites, which ultimately suppresses its occupancy score. The two streateries, however, have much higher maximum users at one time (16 for Some Random Bar and 23 for Montana Bar), and this level of usage is sustained during the businesses' operating hours.

[8] It is worth noting that the results related to occupancy score mirror those of a parklet evaluation conducted in Philadelphia (University City District, 2015). In this study, of the six sites studied in summer 2013, "average occupancy" (calculated the same way as occupancy score) ranged from less than 0.20 to over 5.0 users at any given time, with half of the sites having at least one user in the parklet at any given time. This is the only other parklet evaluation to conduct all-day observations to which the data for this thesis could be compared.

[9] The 84% of time in-use statistic was skewed upwards by the user who stayed in the parklet for over 6 hours. Without this outlier use, percentage of time in use would be 50% for the Uptown Parklet.

Figure 17. Site Performance on Two Key Metrics (Occupancy Score and Percent of Time in Use)

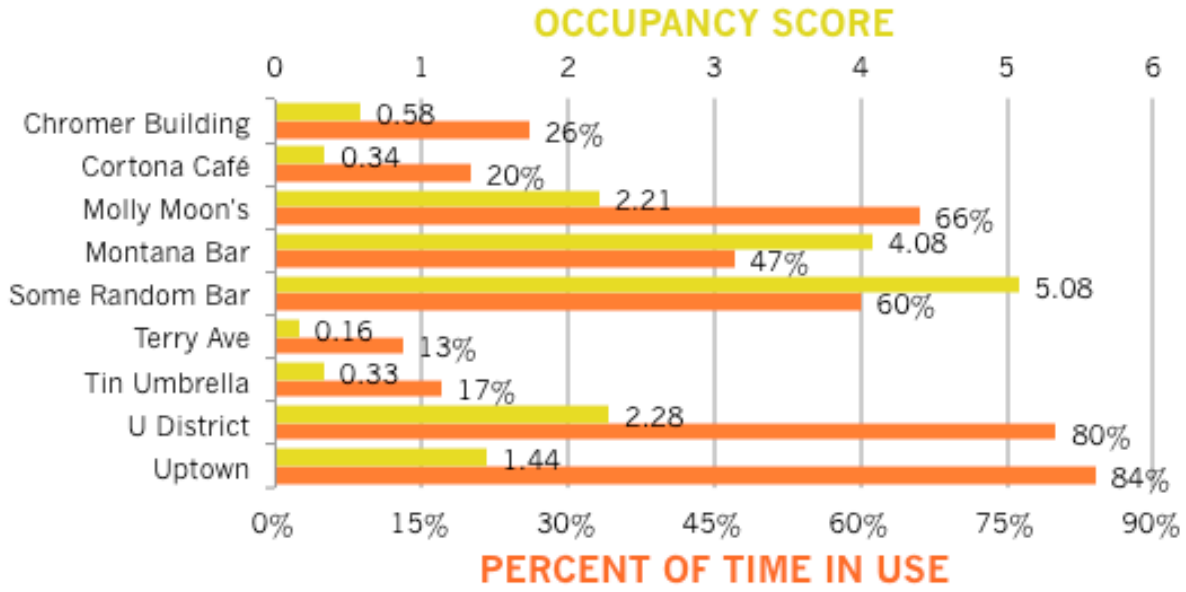


Figure 18. Diagram of Site Performance on Two Key Metrics (Occupancy Score and Percent of Time in Use)

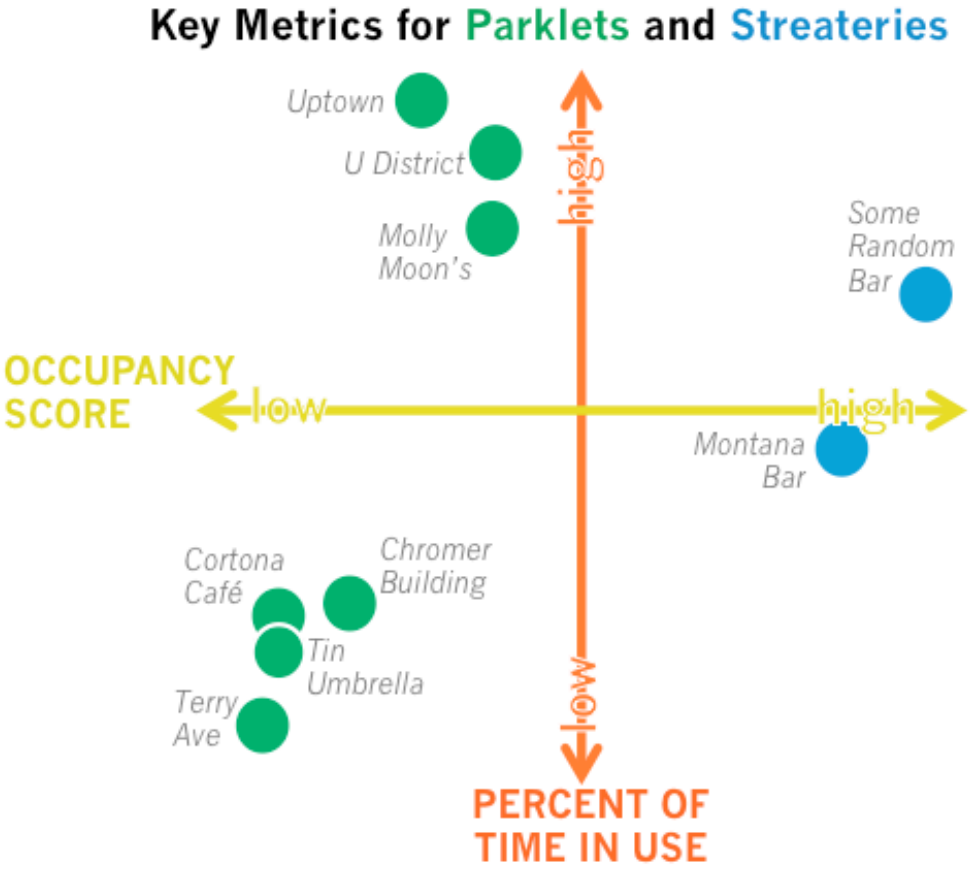


Table 6 underscores this usage pattern for streateries specifically by showing the degree to which streateries' high level of usage during business operating hours increases its performance statistics over the course of the entire day. Interestingly, the streateries' performance when it is "public" (when the business is not using the space for table service) resembles the usage experienced in some of the lower performing parklets in the lower left quadrant in Figure 18. So, while they certainly perform as vibrant spaces when operated by the hosting business, streateries' function as public spaces the remaining hours of the day is limited.

Table 6. Streatery Performance on Key Metrics Based on Operation Status

KEY METRIC	LOCATION	OVERALL	PRIVATE	PUBLIC
Occupancy Score	Montana Bar	4.08	10.21	0.38
	Some Random Bar	5.08	9.79	0.27
Percent of Time in Use	Montana Bar	47%	93%	19%
	Some Random Bar	60%	94%	24%

This trend is reflected also by the survey data collected at the two streateries. Of the 61 people interviewed at the streatery sites, only 5 (8%) had ever used the streatery during non-business hours, compared to the 30 (49%) who had used the streatery during business hours. All five individuals who had used the streatery during non-business hours reported that they regularly come to that block face at least multiple times a week, with four of them reporting to be neighborhood residents. This might suggest that the streatery's public function is not immediately apparent to casual passersby. Finally, respondents who had not used the streatery during non-business hours provided reasons for that fact, including: lack of awareness of its public function (n = 9), no interest in the

space without food service (n = 6), and a sense that the space as designed is not amenable to lingering (n = 4).[10]

Parklet Usage in Context

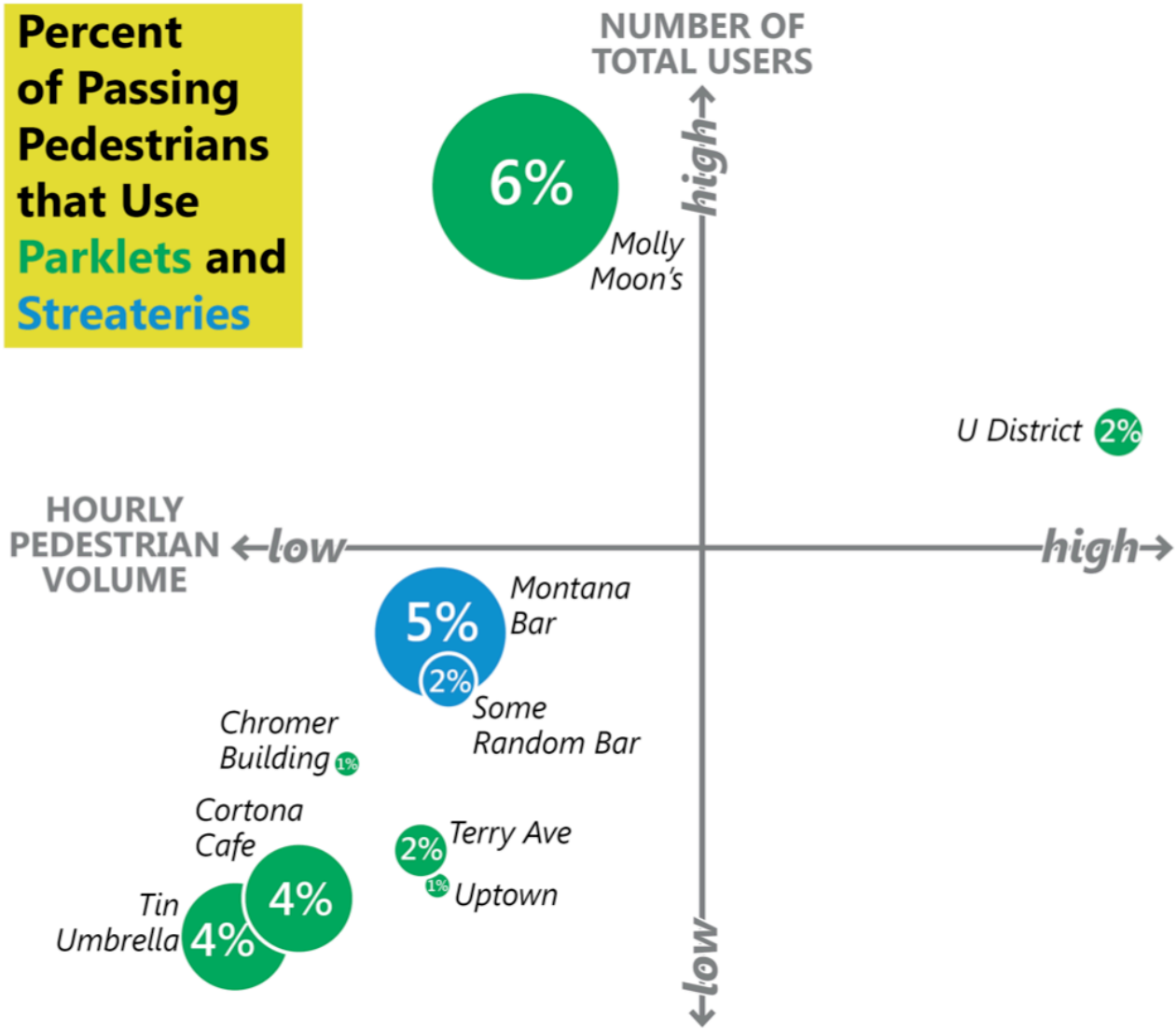
Although absolute counts of parklet usage are important, these results should also be interpreted taking into account the particular environment in which each parklet operates. All of the nine sites in question are of different sizes and designs, and located on streets and in neighborhoods that are very different from each other. There is an argument to be made that interpretation of results should be framed in a way that scales the analysis to the conditions of the local environment. For this reason, this sub-section discusses usage relative to pedestrian activity, parklet size, and local residential density.

First, parklet usage can be analyzed relative to the pedestrian activity on the block. Based on pedestrian counts collected in the field, I calculated average hourly pedestrian activity along the block face on which each parklet is located during the hours observed. Figure 19 below provides a diagrammatic illustration of the hourly pedestrian volume (scale running left to right in ascending order) and the total number of users (scale running bottom to top in ascending order). The size of the circle represents the proportion of passing pedestrians that use the parklet. Looking at the data using this diagram way, it is clear that the Molly Moon's parklet is an outlier in terms of total number of users, while the U District parklet has by far the highest pedestrian activity on the block face. For the U District parklet, the proportion of passersby is thus relatively

[10] Responses included: "Not all that friendly to hanging out," "Space seems weird," and "Haven't needed/wanted to."

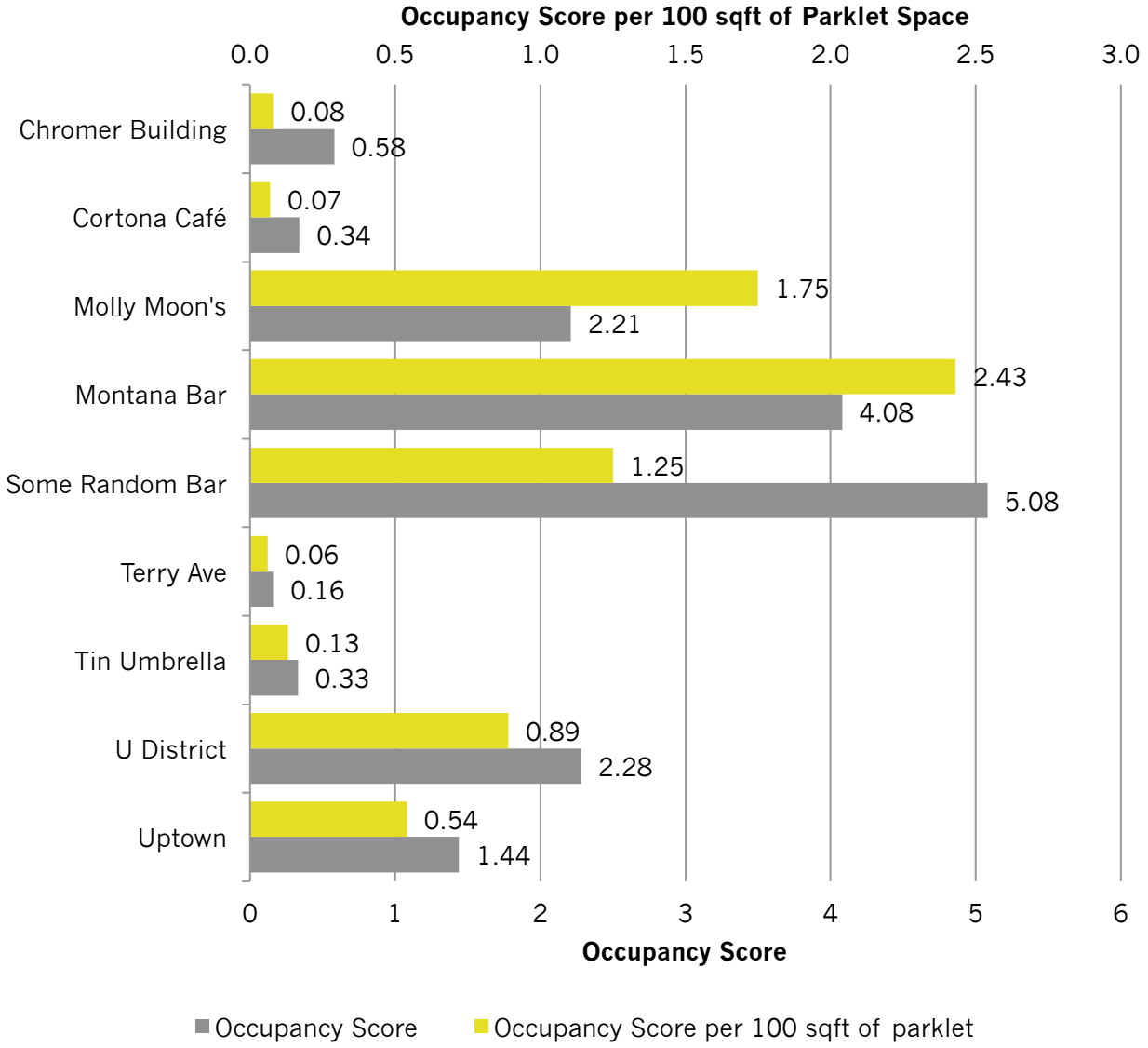
small in comparison, even though the seating options were near capacity during the entire time the space was observed. Interestingly, two parklets that have relatively low performance using the two key metrics—Cortona Café and Tin Umbrella—perform well when looking at it relative to pedestrian activity on block. This suggests that these spaces are well used, if considered in relation to the street's low levels of pedestrian activity, with nearly 4% of all passersby occupying the space.

Figure 19. Percent of Passing Pedestrians that Use the Parklet, Displayed by Pedestrian Volume on Block and Number of Total Users



Second, it is important be aware that the parklets themselves vary in their size, and thus capacity to hold users. Square footage for the parklets range from 126 (Molly Moon's) to 718 (Chromer Building) with an average across sites of 330 square feet. In an effort to standardize the analysis based on parklet size, each site's occupancy score was analyzed per 100 square feet of parklet space. Figure 20 provides the results of this analysis, as compared to the occupancy score already discussed above. These results suggest that Montana Bar and Molly Moon's are the most space efficient parklets, in that they are able to accommodate the most use in the least amount of space. Interestingly, the two streateries diverge in their space efficiency metrics, with Montana Bar increasing its occupancy score relative to size, while Some Random Bar decreased; this is due to the fact that Montana Bar has little seating, and requires its users to stand, while Some Random Bar has tables and chairs to allow for full-service restaurant activities. The least space efficient parklets are Terry Ave, Cortona Café, and Chromer Building, which have the lowest occupancy scores per 100 square feet of space. The Chromer Building parklet has a larger difference between overall occupancy score and occupancy score per 100 square feet due to its very large size. The remaining parklets have similar patterns relative to their overall occupancy scores, as discussed in the Key Metrics sub-section.

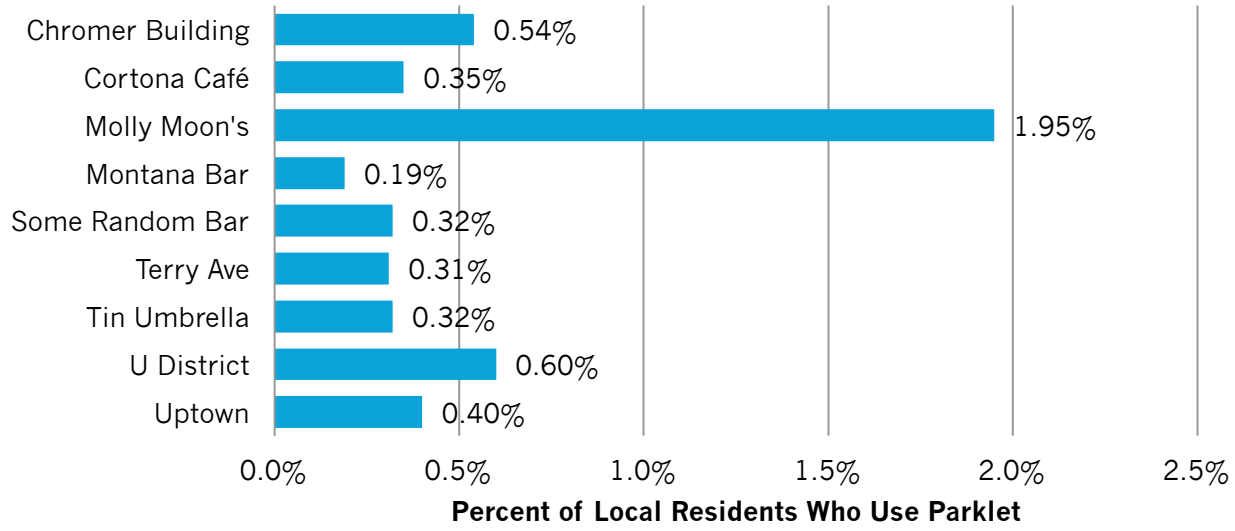
Figure 20. Occupancy Score (Overall and Per 100 Square Feet of Parklet Space)



Third, parklet usage was compared to the residential density of the census tract in which the parklet is located. Residential density was measured using the average number of residents per square mile within that census tract. Again, the Molly Moon's parklet performed well in this relative measurement, with parklet users representing nearly 2% of the residents per square mile. The remaining parklets had results that ranged between

0.19% and 0.54%, with a cluster around 0.31%. This seems to indicate that there is some consistency in parklet usage, as least as it relates to the local residential density.

Figure 21. Proportion of Users Relative to Number of Residents in Surrounding Area



Unfortunately, it was not possible to analyze usage based on local workforce numbers, which would have been particularly pertinent to this study given half of the observations occurred between 11am and 7pm on weekdays.

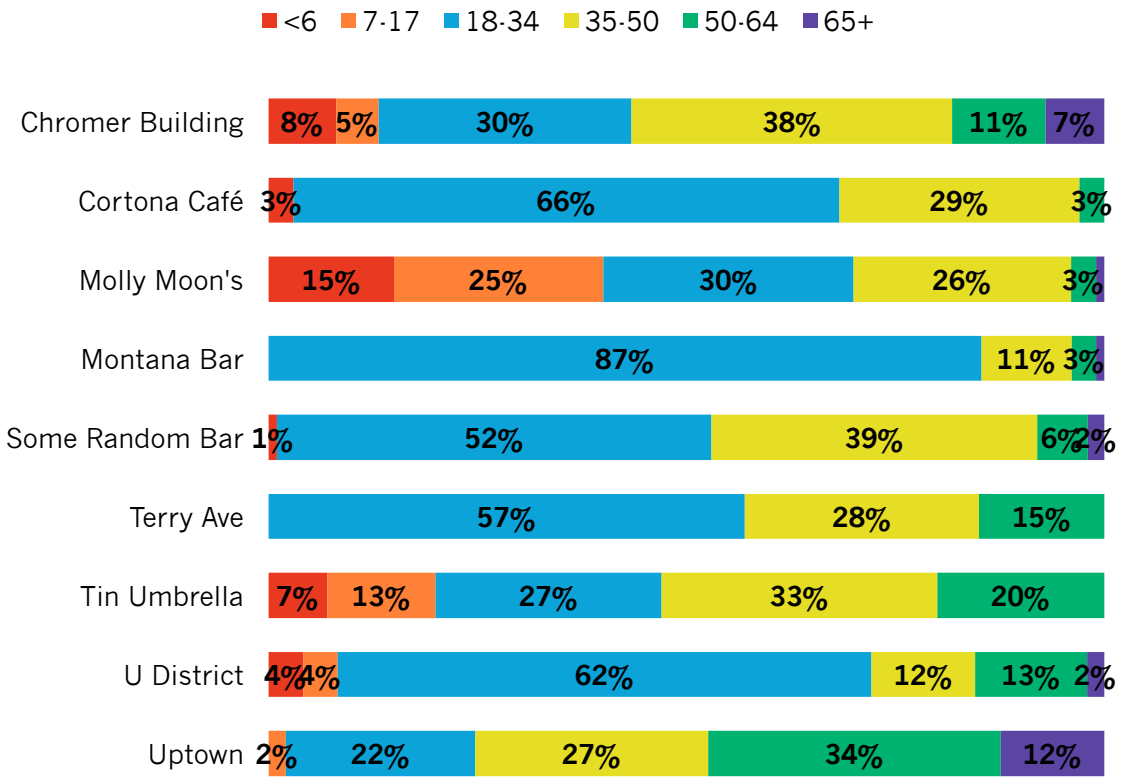
USER DIVERSITY

Understanding user diversity is critical for assessing the spaces' accessibility to all segments of the population, and in turn, the degree to which the spaces are truly functioning as public and democratic places. This section highlights the demographic profile of parklet users by site, including age, gender, and race/ethnicity.

Age

Parklets serve a broad group of users in different life stages. The largest user group is young adults between the ages of 18 and 34 (49% across all sites), with significant use from middle aged users between 34 and 50 years (24% across all sites), youth under 18 years old (17% across all sites), and those over the age of 50 (11% across all sites). As would be expected, these usage trends varied across sites, as illustrated in Figure 22. Molly Moon's, Chromer Building, and Tin Umbrella served the largest proportion of youth (less than 18 years old), while Uptown served the larger proportion of senior individuals (over 65 years old).

Figure 22. Age Distribution of Users



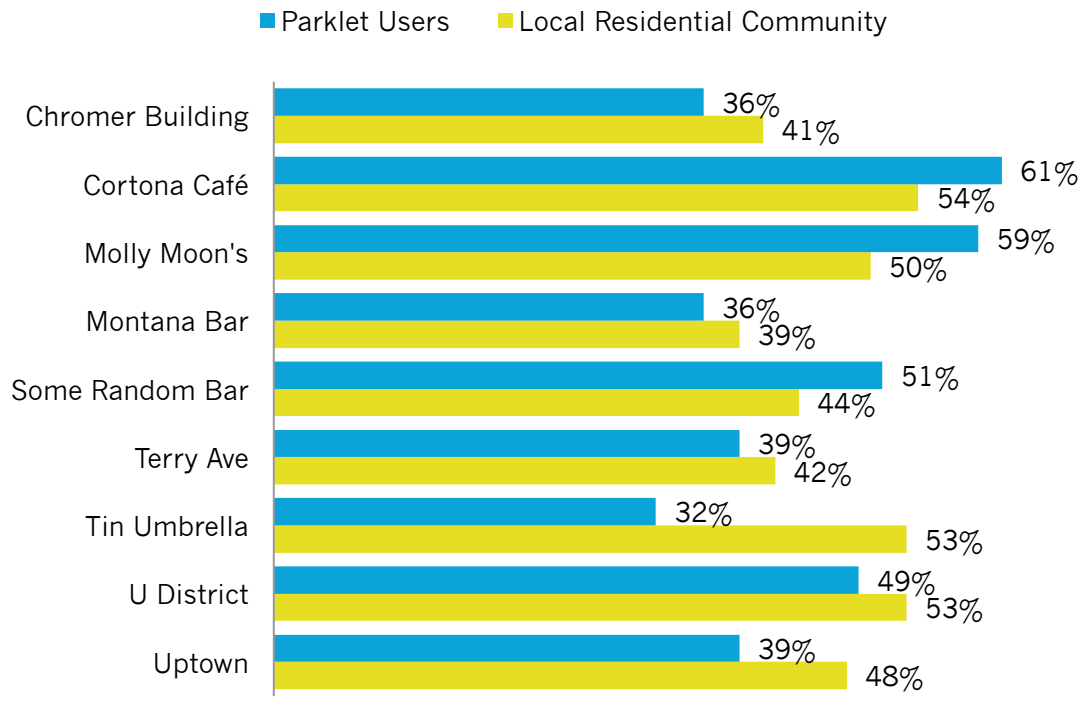
Although absolute percentages are informative, it is also important to compare these to the age distribution found in the local population to understand if these percentages are representative of the community as a whole and if any age group present in the community is currently not using these spaces. Compared to local population gathered from the 2014 American Community Survey, there is a higher proportion of youth users (less than 18 years old) compared to local residential population for all sites except for Montana Bar, Some Random Bar, and Terry Ave. This is likely due to these sites' orientation toward adults in their function—serving alcohol for the former two, and its location directly outside of an office building for the latter. The opposite is true for use by elderly individuals. A smaller proportion of elderly individuals (65 years and older) were documented using the parklets compared to the parklets' local residential population. The exception to this was the U District parklet, whose elderly users were proportional to the local community (2%), and the Uptown parklet, which disproportionately served elderly users. In total, 12% of the Uptown users were over 65 years old, compared to only 5% of the local population.

Gender

The percentage of females stationary in any public space is considered an indicator of the quality of the space. Women are typically more careful about the spaces they occupy based on their sense of perceived safety (Whyte, 2010). In total, 48% of the parklet users were female, indicating a healthy balance on the whole. On a site-by-site basis, there was some variability in the proportion of female users from 34% (Tin Umbrella) to 61% (Cortona Café). These proportions were also compared to the local population demographics, as shown in Figure 23. Overall, the proportions between users and the

local residential population are not entirely disparate, with only one site—Tin Umbrella—demonstrating a substantial deviation from their local context.

Figure 23. Percent of Female Parklet Users as Compared to Local Residential Demographics

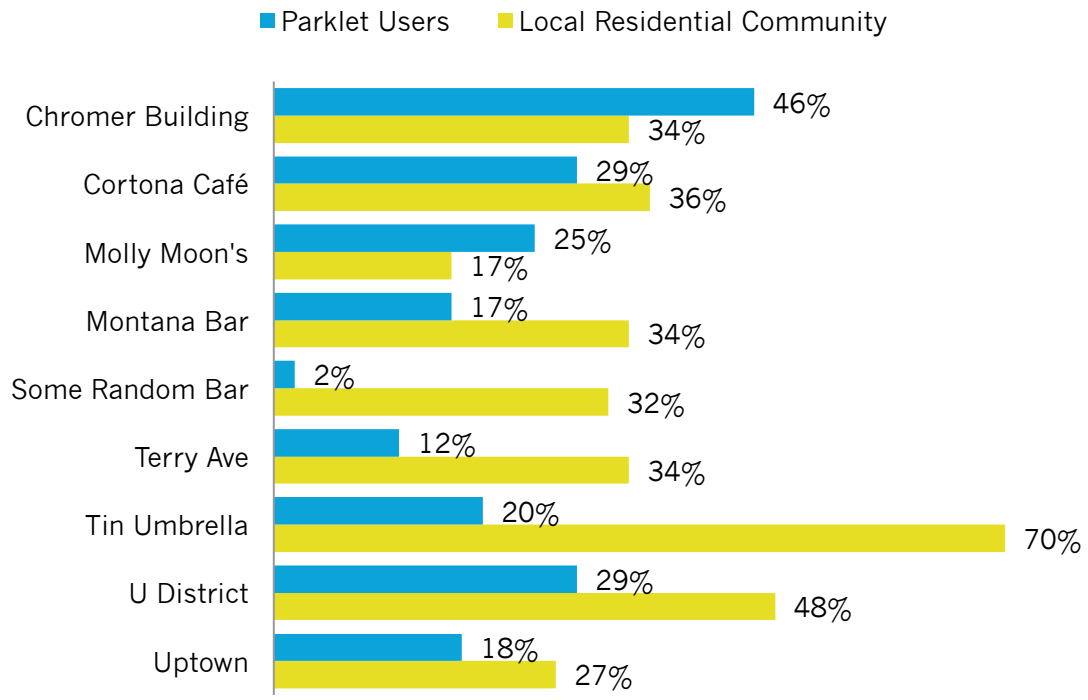


Race/Ethnicity

It is particularly important to be aware of the use of these spaces by those who are traditionally underserved or disadvantaged. By documenting the apparent race and ethnicity of all users, this thesis attempted to understand if these spaces are truly public in the sense of appealing to and drawing in a mix of people that was representative of the surrounding neighborhood. In total, one in four users (26%) were from a minority background, defined as non-white race or Latino ethnicity. Sites ranged in their proportion of minority users from 2% (Some Random Bar) to 46% (Chromer Building), as shown in Figure 24. In fact, the Chromer Building was the only site to serve a larger

proportion of minority users, as compared to the local residential population. The remaining sites had outsized use from white users, especially as compared to the larger population demographics, which should be cause for concern for SDOT staff. The largest gap was observed at Tin Umbrella, where only 20% of the users had a minority background in a census tract in which 70% of the population has a minority background.

Figure 24. Percent of Racial/Ethnic Minority Parklet Users as Compared to Local Residential Demographics

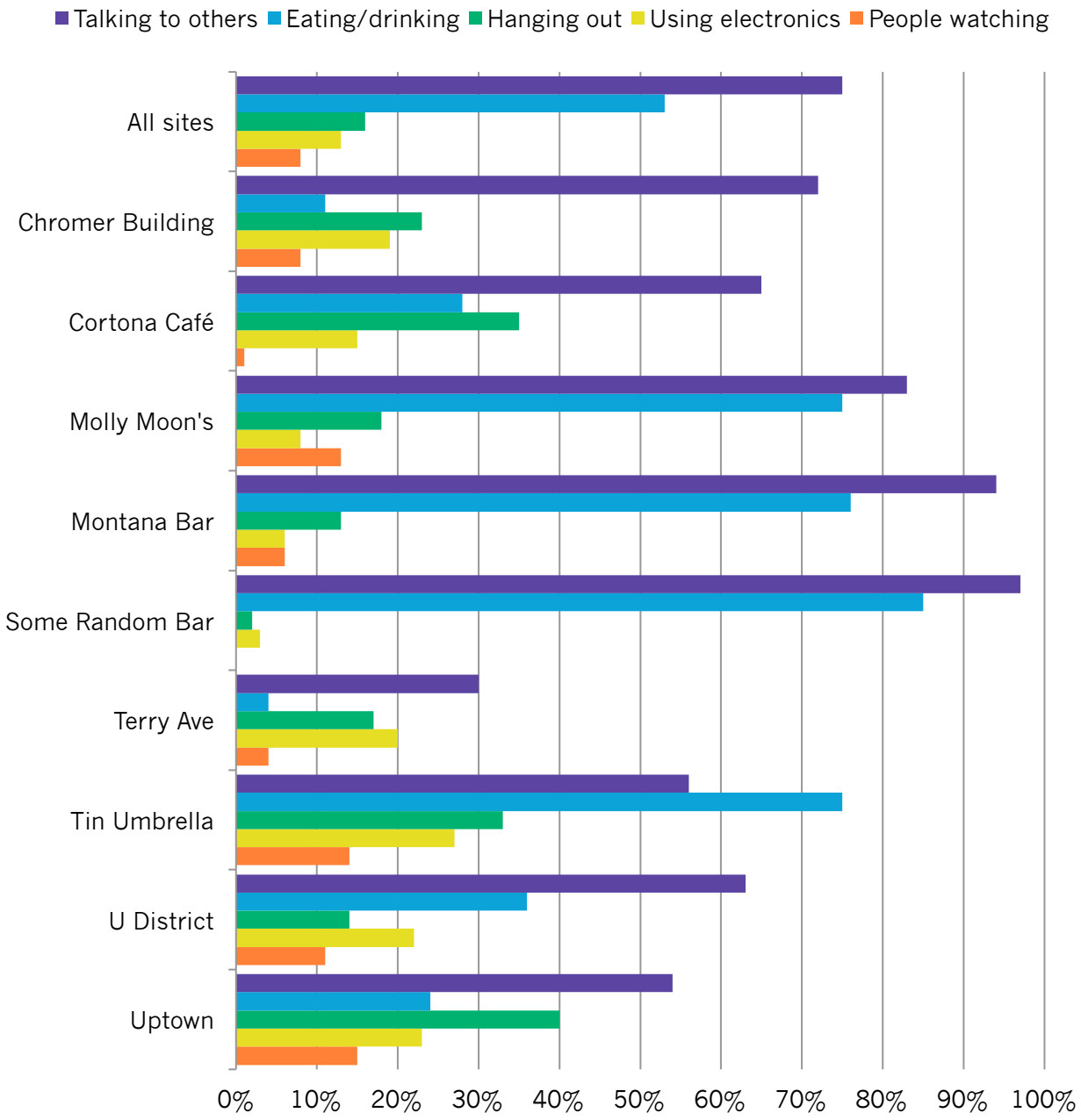


PARKLET ACTIVITY

In general, there are a few types of activity that dominate the functional life of parklets, regardless of site. Across all sites, talking to others and eating/drinking were the most popular activities by a wide margin, as shown in Figure 25. It is likely no coincidence that the three parklets that did not have a relatively high rate of eating/drinking activity also happen to be the two parklets that are not hosted by a business that supplies either food or drink: Uptown, Terry Ave, and Chromer Building.[11] Although each site varied based on the prevalence of eating/drinking, every parklet observed had talking to others documented as the single most prominent activity for users; these interactions are discussed in detail in the next section. Other activities with moderate popularity included hanging out[12], using electronics[13], and people watching.[14]

[11] The Chromer Building parklet has a sit-down service bar located on the block face, but this food is not easily transportable for take-out to be enjoyed in the parklet. Additionally, table service is currently not permitted in the parklet, even though the bar is currently in the process of applying to convert one portion to the parklet to a streatery for their exclusive use.
[12] "Hanging out" was a catch-all term used to classify all parklet user who were not engaged in any activity in particular beyond simply enjoying the space and the local environment.
[13] "Using electronics" applied to people using smartphones, tablets, or music players.
[14] "People watching" applied to people who were actively watching—as opposed to casual, passing glances—passersby or others within the parklet.

Figure 25. Percentage of Parklet Users Engaged in Commonly Observed Activities



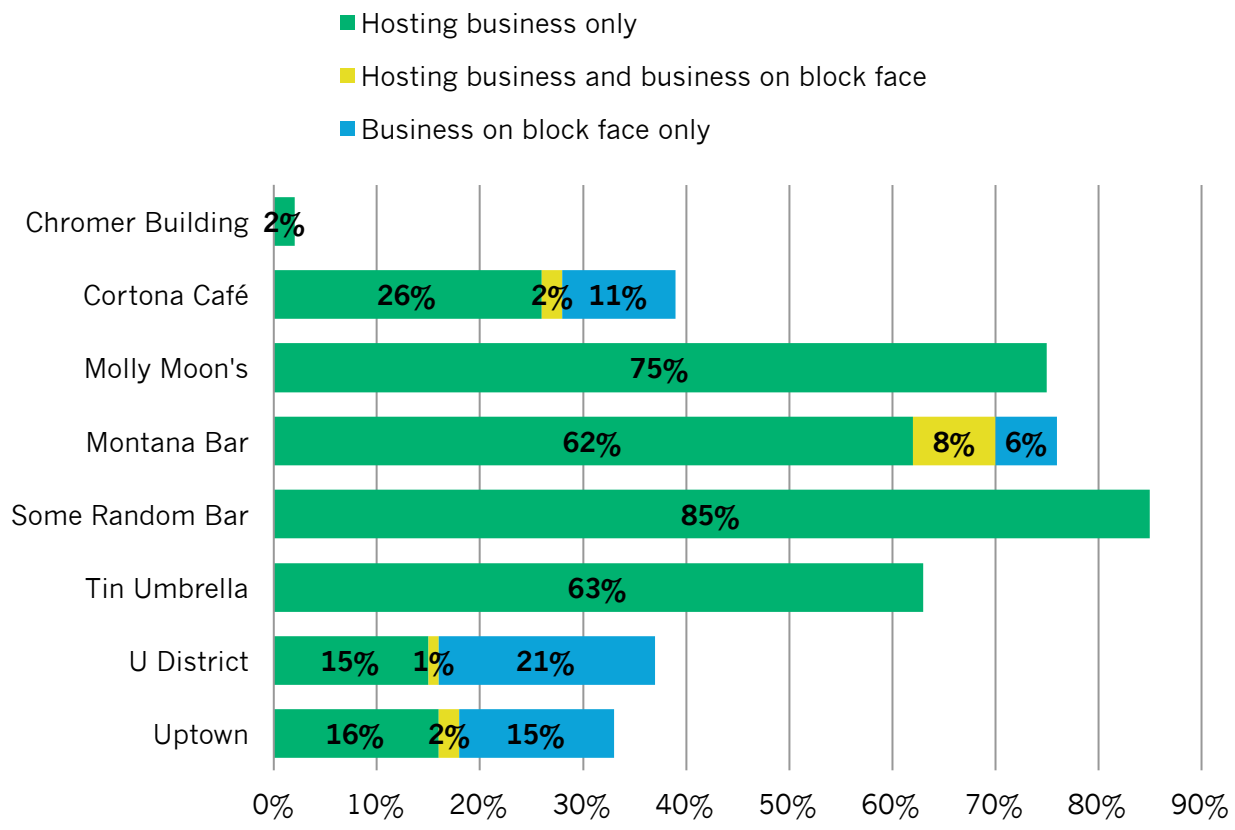
	Uptown	U District	Tin Umbrella	Terry Ave	Some Random Bar	Montana Bar	Molly Moon's	Cortona Café	Chromer Building	All sites
Talking to others	54%	63%	56%	30%	97%	94%	83%	65%	72%	75%
Eating/drinking	24%	36%	75%	4%	85%	76%	75%	28%	11%	53%
Hanging out	40%	14%	33%	17%	2%	13%	18%	35%	23%	16%
Using electronics	23%	22%	27%	20%	3%	6%	8%	15%	19%	13%
People watching	15%	11%	14%	4%	0%	6%	13%	1%	8%	8%

The Uptown and Chromer Building parklets were the only two with significant proportion of users who engaged in nuisance behaviors, such as smoking and drinking alcohol. The Uptown parklet had 26% of users engaging in one of these behaviors, with four individuals smoking, three drinking alcohol, and one sleeping in the parklet. Similarly, nearly a fifth (19%) of Chromer Building parklet users smoked while in the parklet, but none were intoxicated or sleeping. The remaining parklets had very small proportions of users engaging in nuisance behaviors, ranging from 0% to 6%.

Purchasing Behaviors

Because one of the goals of this program is to foster economic development for the hosting business and the surrounding businesses, activities related to purchases made during the visit to the parklet were emphasized during data collection. Figure 26 below provides results related to what proportion of users purchased something from the host or from the block. Users of the Some Random Bar, Molly Moon's, Montana Bar, and Tin Umbrella sites are largely also customers of the hosting business. Less than half of the users of the Cortona Café, U District, Uptown, and Chromer Building parklets purchased anything from the block on their visit.

Figure 26. Parklet User Purchasing Behaviors Related to Businesses on Block



Note: Chart does not include Terry Ave parklet because there are no purchasing opportunities on block face.

Survey results add another dimension to the relationship between the customer and the business that could no be detected through observation, specifically related to how the space influences behavior choices.[15] Of the 61 survey respondents asked about their opinions of streateries, 72% indicated that the presence of the streatery made them more likely to visit the business. This relationship was exaggerated for Some Random Bar, for which 83% of respondents said they would be more likely to visit the business because of the streatery, compared to 66% for Montana Bar.

[15] This question was not posed in the counterpart parklet survey, which is something SDOT should consider adding in the future.

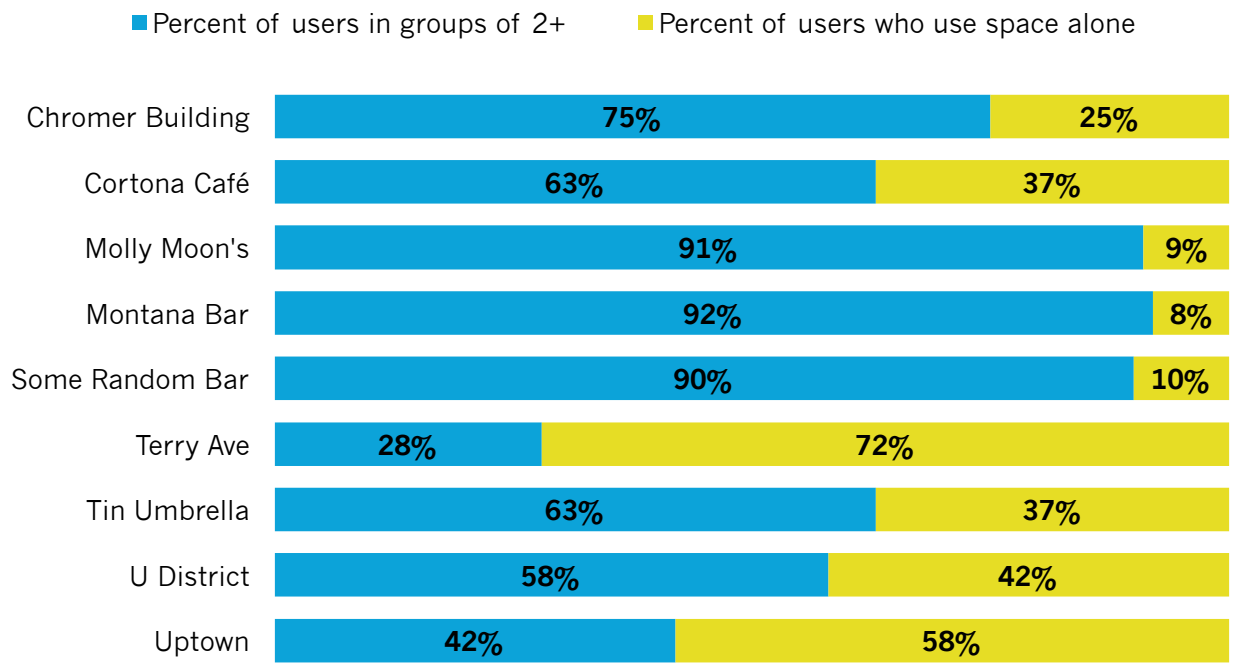
SOCIAL DYNAMICS

As mentioned in the previous section, parklets are very social places with "talking to others" being the most common activity observed, representing 75% of all users across all sites. This section summarizes the social dynamics of these spaces, including a description of sociability of sites, how different groups interact spatially in these small spaces, as well as how the presence of homeless people within the parklet setting affects the functioning of these spaces.

Sociability of Sites

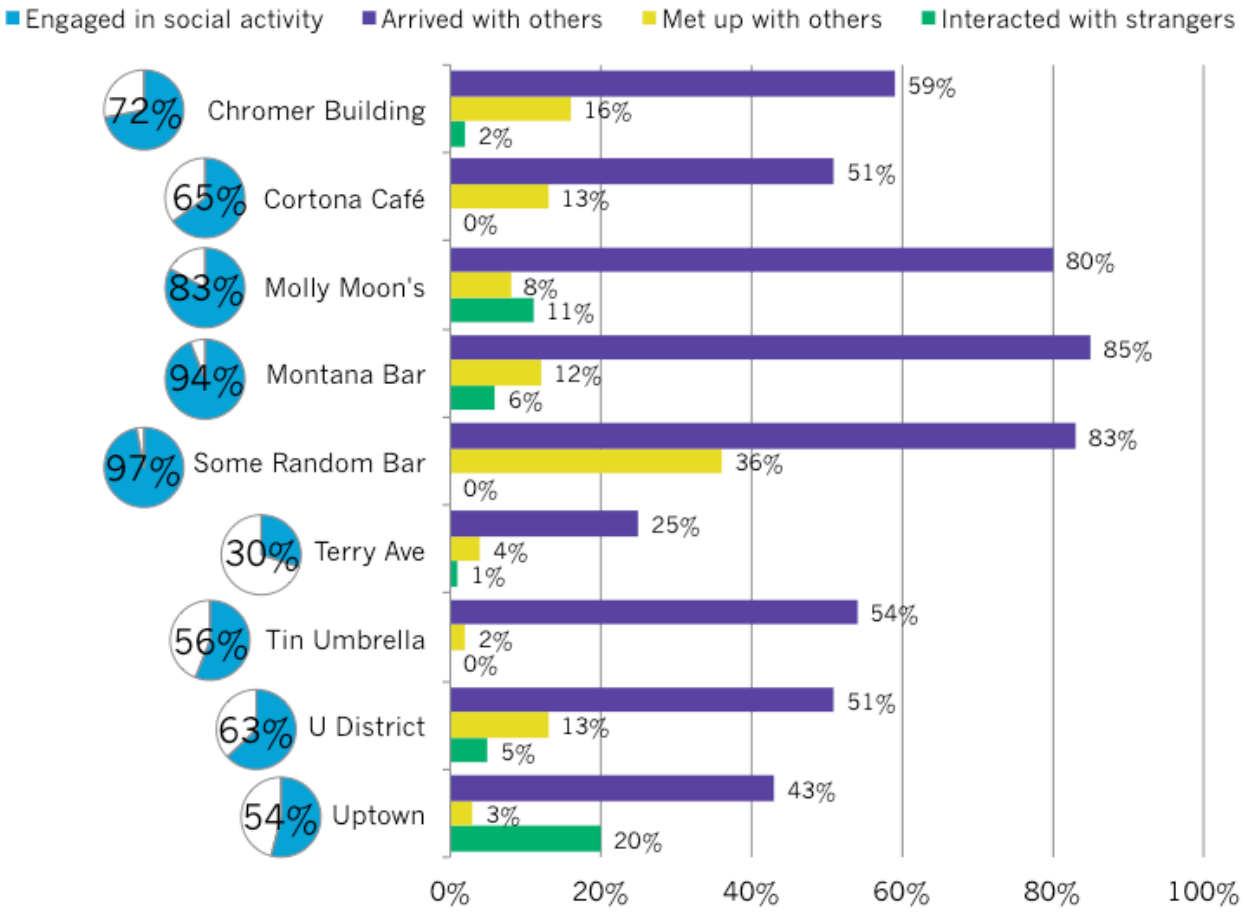
Figure 27 provides the percent of users in groups of two or more people and percent of users who remained alone throughout their visit, by site. Montana Bar, Some Random Bar, and Molly Moon's are the most social spaces, with over 90% of all users using the space as a part of a group of two or more people. The least social site was by far Terry Ave, with only 28% of all users in a group of two or more people. Uptown, U District, Tin Umbrella, and Cortona Café had a more balanced mix of single users and groups of users, with the proportion of single users ranging from 37% to 58% of all users.

Figure 27. Percent of Users in Groups and Alone



Since social interaction is such an important indicator of the quality of a public space, additional detail on the types of social interaction present at each site were also collected. Specifically, each social interaction was classified based on the observed relationship between the individuals: whether they arrived together, if they met up at the parklet, and if the interaction was between strangers. Figure 28 below presents the results by site. The pie charts on the left represent the percent of users who were involved in any social interaction (the same statistics as was shown in Figure 25), while the bar chart on the right displays more details on the nature of these interactions.

Figure 28. Types of Social Activity Present by Site as Percentage of Total Users



Note: In some cases, the percentages in the bar chart for each site add to more than the percentages in the pie charts because some users were engaged in multiple types of social interactions.

Arriving with the people they interacted with was by far the most common type of social interaction at each of the sites. A sizeable proportion of Some Random Bar streatery users (36%) met up with the people they interacted with at the site, which makes sense since it is a restaurant, and thus, a natural common meeting place for people that know each other. Interestingly, there was a fair amount of interaction among strangers at the Uptown (20% of users) and Molly Moon's (11% of users) parklets, while many of the parklets had little to no interaction between strangers.

Although interaction among strangers was rare across sites, survey results indicate that the parklet sites at least appear to be spaces amenable to spontaneous interaction. Across the seven parklets, 64% of the 77 respondents surveyed believed that the parklet was a place where it is easy to meet and talk to others.

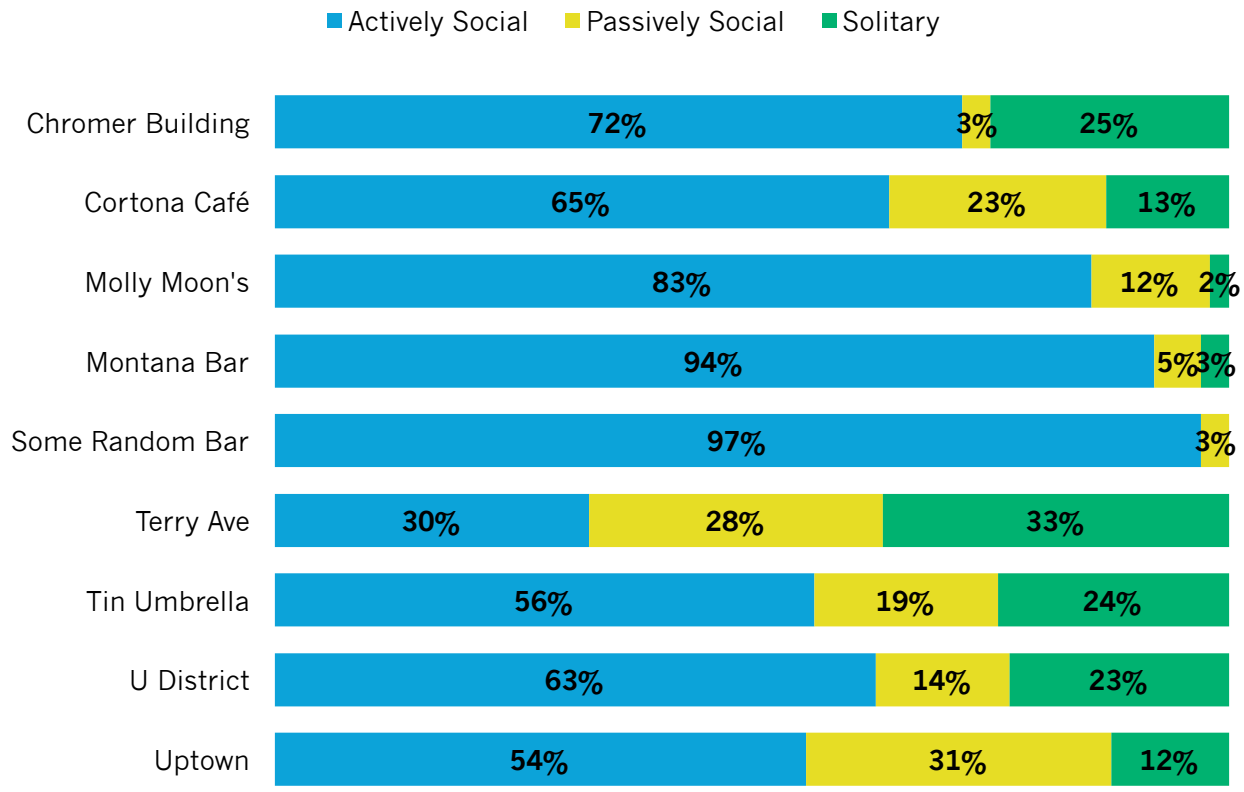
Figure 28 alone does not adequately describe the social dynamics of these spaces and the sense of sociability I observed in the field. Even though many parklets did not facilitate interaction among strangers, there were degrees of sociability that fall outside of direct spoken communication. The activities people chose to engage in while in the parklet also signal their willingness to interact with their surroundings, if not others using the space. To me, there was a notable difference in the openness and warmth of feeling of the space, based on what proportion of users were engaged in activities that they alone could exclusively enjoy and prevented them from interacting with the larger context. As such, I revisited the activities discussed in the previous section and developed new categories for describing the social openness of users:

- Actively social: talking to others
- Passively social: people watching, hanging out, playing, eating/drinking
- Solitary: talking on the phone, using electronics, reading/writing

Figure 29 below illustrates the proportion of users that fall into each category, by site. The largest amount of solitary behavior was observed at the following parklets: Terry Ave (33% of all users), Chromer Building (25% of all users), Tin Umbrella (24% of all users), and U District (23% of all users). The Terry Ave parklet was used largely as a space to talk on the phone for the office workers in the adjacent building, or a place to wait for others, in which case most people read their smart phones. For Tin Umbrella and U District—as would be expected for a parklet outside of a coffee shop—had many users

who were focusing on reading or writing, and thus were not looking to be socially open to the environment.

Figure 29. Observed Social Openness of Parklet Users



It is worthy noting that even those engaged in solitary activities are still making a decision to do so in public, which makes it a form of social interaction to at least a small degree. Thus, these solitary users are opting to experience the parklet, sometimes with others using it and on a street with passing pedestrians. This alone is a choice to participate in the social world outside of private space, even if not actively or passively engaging with others.

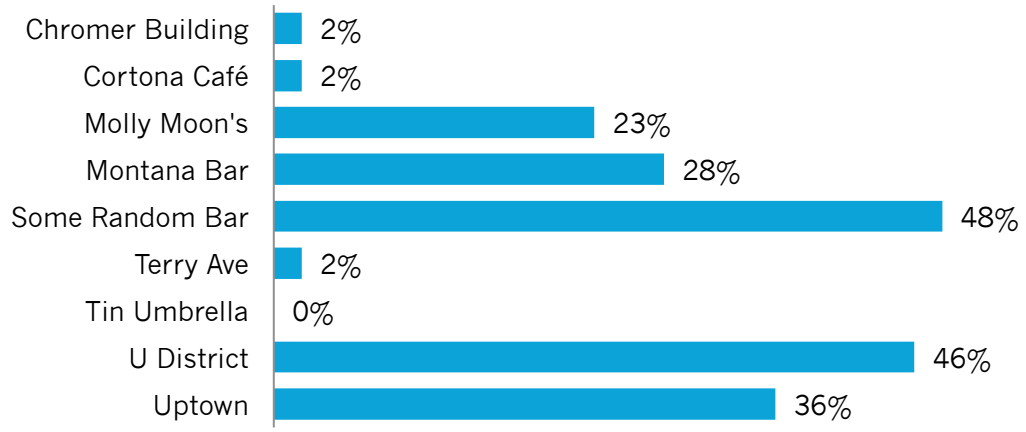
While the literature suggests that social activity is an indicator of health and vitality of a public place, I would contend that a mix between social—whether active or passive—and solitary activity may also be an indicator of a quality space because it allows for a diverse array of activities. Especially in the case of the parklet, in which seating is placed in the roadway next to cars passing by within feet, the presences of solitary activity that might require some level of focus—such as reading or writing—might be a good indicator of the sense of comfort and pleasantness of the space by the users.

Interpersonal Distances

Parklets as a form of public space are unique in their scale; even the smallest pocket parks typically occupy more space than a parklet. Considering this new dimension of public space where stationary activity is encouraged adjacent to the sidewalk and seating elements are placed near each other in a compact setting, there develops the question of how people spatially interact with others when sharing the parklet. Overall, the total amount of time observed in which the parklet was shared between multiple groups[16] was relatively small, ranging from 0% (Tin Umbrella) to 48% (Some Random Bar), as shown in Figure 30.

[16] A "group" for this analysis means the unit of users for which information was collected and collective activity occurred. People who used the parklet alone were considered a single group, as were people who used the space together. For instance, if two single people used the parklet at the same time, this would be considered two "groups."

Figure 30. Percent of Time Observed in which Multiple Groups Shared the Parklet



For the most part, observations confirmed my hypothesis that the small scale of the space resulted in people functioning in relationship to others in dimensions closer than they might otherwise. While people in public spaces typically keep to what Gehl calls the "public distance" of twelve feet or more from each other, this comfortable distance is not typically available to parklet users if multiple groups want to use the space. Due to the size of the parklets and placement of seating elements, people were more likely to sit within four feet of others, which Gehl describes as a "personal distance," reserved typically for distances between close friends and family. In one extreme example in the U District parklet, a woman sat within a foot another woman on a bench that was otherwise only used by those in the same group; she did this in order to get prime exposure to sunlight, even though other seats were available in the parklet. This distance of less than a foot is an "intimate distance" and Gehl considers it to be the distance at which emotions can be shared among family or intimate friends (Gehl, 2010). The first woman was surprised to have the newcomer sit so close to her, but quickly accommodated her with no issue.

Interactions with Homelessness

Parklets are available to all members of the public. Unlike Seattle parks, which operate with a separate set of rules, restrictions, and regulations, parklets are managed as right-of-way and thus are free and open to all, 24 hours a day. As such, one of the main constituencies that use parklets is the homeless. One of the questions I had in this research was how the presence of this population in these spaces affects the function of these spaces, if at all. While in the field, there was no definitive way to determine the homelessness status of any particular parklet user, so while this commentary uses the word "homeless," the housing status of those observed was not confirmed.

I observed homeless people in only two of the nine parklets. Overall, the presence of homeless people, along with their belongings—which in two cases were brought into the parklet in carts—did not prevent others from using the parklet at the same time. In fact, many users started using the parklet when homeless people were already occupying it and in a few cases even shared in conversation with each other. This was particularly evident in Uptown parklet, where a homeless person slept on a bench all day during the weekday observation period and many people still used the parklet, some even sitting within five feet. During the weekend observation period, a homeless man drank openly in the space for a few hours. The rate of use by others was consistent with the rest of the day, indicating that his presence and that "nuisance" activity had little effect on usage. When observing the Uptown parklet, there was evidence of a sense of stewardship over the space by the homeless users, as two separate individuals who appeared to be frequent users of the space cleaned up trash that had been left in the parklet.

At the U District parklet, a homeless woman brought her cart into the middle of the space and took over two separate benches. She kept to herself mostly but was mumbling derogatory phrases under her breath. People continued using the space and more joined after her arrival.

A recent development since the field research was completed underscores the fact that this research consisted of just a snapshot of time and cannot characterize this dynamic in its complicated entirety. While the 16 hours I was observing the Uptown parklet in March and April 2016, I saw a harmonious relationship between the local homeless and other users. However, in early May 2016, a homeless individual set up a camp including a shelter structure in the space, which is an activity that is typically interpreted to be prohibited by the following sections of the Seattle Municipal Code: 11.72.430,[17] 12A.12.015,[18] and 15.48.040.[19] With the recent encampment by one individual, the site could no longer function as a public space since there was no room for anyone else to enjoy the parklet. This is not the first incident of this nature at the Uptown parklet, but it is proving to be a catalyst for altering the parklet's circumstances. SDOT is working with the hosting organization, Uptown Alliance, to find a solution. In the short-term, Uptown Alliance has worked with Seattle Police Department to remove the individual and has also encouraged the local cinema to more directly activate the space with their own programming, particularly during the film festival it hosts. The long-term solution is to potentially relocate the parklet somewhere nearby with a more active business frontage

[17] SMC 11.72.430 prohibits the use of a trailer or camper on any street or alley.
[18] SMC 12A.12.015 prohibits pedestrian interference in a public place and the obstruction of pedestrian traffic.
[19] SMC 15.48.040 prohibits a person from sitting or lying down on public sidewalk between the hours of 7am and 9pm in the Downtown Zone or a Neighborhood Commercial Zone.

in an effort to discourage this type of encampment in the future. This approach appears to have been a success in the case of the U District parklet, which moved the project to a more active store frontage and more engaged steward; as a result, this parklet now appears to be a more used and inclusive environment.

TOWARDS A PARKLET ASSESSMENT

Ultimately, I intend for the results presented in this thesis to inform preliminary hypotheses of parklet function. This section provides a brief synopsis of the functional life of the parklets by offering a preliminary classification system, as well as a discussion of potential physical and social factors affecting parklet usage.

CLASSIFYING PARKLET FUNCTION

Based on this analysis, the functional life of these parklets can be split into four groups:

Thriving public places. Three parklets can be seen as unequivocal successes: Molly Moon's, U District, and Uptown. All three of these parklets perform well across a variety of measures, both looking at absolute numbers and scaled to context. These are the only parklets that have on average at least one person using the parklet at any given time. In addition to high levels of usage, each parklet is the setting for a diverse array of activities and users. In this study, Molly Moon's is the model for efficient use of space considering its small size and high occupancy score. It also performs the best relative to pedestrian rates on the adjacent sidewalk and the local residential density. In fact, considering the outsized proportion of parklet users compared to local pedestrians, it is likely that Molly Moon's and its parklet are alone a destination for this area, and are actually attracting

people to this street. On the other hand, U District and Uptown are the models for truly public spaces, since their user bases consist largely of those who have made no purchases at hosting businesses, unlike Molly Moon's. Therefore, at the U District and Uptown parklets, there is a high level of use with little sense of obligation to purchase something to use the space, making it appear to be a truly open, public space for all to enjoy. Additionally, the Uptown parklet is also the model for diversity of users, with people from a variety of life stages all sharing the same space. It also presented the most compelling example of how a parklet can be a place to confront differences, with the steady use by homeless individuals, and the relatively high rate of interactions among strangers. These three parklets all have different use bases and typical activities, but are all successful in encouraging use and performing well across a variety of different metrics, indicating that they are complex and well-rounded public spaces.

Popular private spaces with limited public purpose. As discussed in this chapter, the two streateries function in a very different way than the rest of the parklets studied for this thesis. Montana Bar and Some Random Bar perform better than all parklets when looking at the occupancy scores because they are able to bring many users into a small space at the same time, while also fostering longer dwell times due to the fact that users are typically eating or drinking. They are also very social spaces, with nearly all users talking to other people during their visits. Despite their success as a streatery, their public function appears to very limited. In fact, when open to the public during non-operating hours, streateries perform as poorly as the lowest-performing parklets in the two key metrics because few people use the space, and even fewer linger for significant amounts of time.

Additionally, although they are social spaces, they are not socially open to the larger context at hand. Streateries have a distinct sense of closed-in, guarded space in which strangers do not need to interact or even recognize each other. Some of this may be due to the design requirements established by the Washington State Liquor and Cannabis Board, which requires some form of fencing or barrier to separate serving space from the sidewalk. In a telling moment at the Some Random Bar streatery, a homeless person with a sign walked up to a few groups of people eating and drinking, looking them in the eye for some recognition. No one within the space registered this person even though he was in their line of vision, opting instead to treat the streatery as a private space where they were excused from confronting the challenges of urban life. I found this to be a good example of how the streateries function in relation to their wider contexts, which is held in stark relief to the most successful parklets, which provide a space to confront differences, interact with strangers, and engage in socially open behaviors.

Slower paced spaces with to-scale usage. Two of the parklets—Cortona Café and Tin Umbrella—had low overall usage, but surfaced as successful spaces when their usage was framed in terms relative to the local context. These two parklets are located in mostly residential areas off larger neighborhood commercial districts. As such, they do not bring in the same amount of traffic as a parklet might that is located in a denser neighborhood with more commercial activity in the immediate vicinity, such as the first three successful parklets discussed. Despite this, these two parklets had promising usage statistics when analyzed relative to the pedestrian activity of the street and surrounding residential density. When framed in these terms, parklets can potentially be justified in less dense, less walkable areas.

Underperforming spaces. The remaining two parklets were among the lowest performing spaces for nearly every metric: Chromer Building and Terry Ave. These sites' low performance was consistent when analyzed based on absolute numbers, as well as when framed relative to the local context. While it is impossible to isolate one single variable that might be influencing these low levels of usage, it is worth noting that these parklets happen to be constructed in the two most challenging locations among all nine sites investigated. The block faces on which each of these parklets are located have very little interaction with the space, thus having little to no success in developing the "soft edge" of the sidewalk environment that can fluidly link private to public space, encouraging a more active public realm. While the Chromer Building parklet is adjacent to vacant commercial spaces, the Terry Ave parklet is adjacent to an uninviting office building with no public-facing elements and prominently positioned security guards. These similarities point to the fact that these two sites likely have less hospitable environments for users to stop, rest, and enjoy the public space due to the lack of interaction with the block face.

POTENTIAL FACTORS INFLUENCING USE

Now that parklet usage has been discussed in depth, a natural leap in this discussion would be to identify some of the factors external to the parklet that influence more desirable usage in terms of intensity and quality. With this knowledge, SDOT staff could develop a set of criteria that are likely to result in a more used, vibrant, social, and diverse parklet. This, unfortunately, is not a reasonable or even possible task, considering the number of physical, climatic, social, and cultural variables that shape the function of any public space. That said, I have developed a preliminary method for

understanding the relationship between parklet usage and a variety of external factors, the results of which can be found in Table 7.

Overall, there is a strong (r = 0.52) positive association between higher residential density and parklet usage.[20] Moderately strong positive relationships also exist between parklet usage and the number of customer-facing businesses on the block face (r = 0.45) and pedestrian traffic volume (r = 0.42). Moderately negative relationships were documented between parklet usage and wider sidewalk width (r = -0.46), greater proportion of users below poverty line (r = -0.39), and larger square footage of parklet (r = -0.33); this suggests that more usage was observed at those parklets with narrower adjacent sidewalk widths, in areas with more wealthy local residents, and in parklets that were smaller in size.

It is important to note that I am not attempting to characterize causation, or even any level of statistical significance to these relationships, considering the small sample size of parklets. Rather, this should be interpreted as an exploratory exercise that highlights the relationships that exist in the data at this point. These relationships serve as simple hypotheses, which will need to be bolstered with additional observation data in order to test the strength of these relationships.

[20] This analysis used coefficient of correlation (r) with the following thresholds: strong (-1.0 to -0.5 or 1.0 to 0.5), moderate (-0.5 to -0.3 or 0.3 to 0.5), weak (-0.3 to -0.1 or 0.1 to 0.3), and none (-0.1 to 0.1). These are the same thresholds used in the 2015 parklet study conducted in the University City District of Philadelphia (University City District, 2015).

Table 7. Associations Between Parklet Usage and Site Characteristics, Split by Direction of Association

SITE CHARACTERISTIC	STRENGTH OF ASSOCIATION [a]		
	AVERAGE OF METRICS [b]	METRIC: USER OCCUPANCY	METRIC: PERCENT OF TIME IN USE
Positive Association			
Residential density	Strong	Strong	Weak
Number of customer-facing businesses on block face	Moderate	Weak	Strong
Pedestrian volume	Moderate	Weak	Strong
Number of doors within 100 meters of parklet on block face	Moderate	Weak	Strong
Amount of time parklet is in sun	Weak	Weak	Weak
Number of moveable seating elements in parklet	Weak	Weak	None
Estimated façade transparency of adjacent storefront	Weak	Weak	None
Negative Association			
Distance between curb and lot line on block (sidewalk width)	Moderate	Moderate	Strong
Proportion of local residents below poverty line	Moderate	Weak	Strong
Square footage of parklet	Moderate	Weak	Moderate
Width of roadway adjacent to parklet	Weak	Weak	Strong
Daily automobile traffic count	Weak	Weak	None
No Association			
Proportion of population that commutes by driving alone	None		
Parklet seating capacity	None		

[a] Analysis uses coefficient of correlation (r) with the following thresholds: strong (-1.0 to -0.5 or 1.0 to 0.5), moderate (-0.5 to -0.3 or 0.3 to 0.5), weak (-0.3 to -0.1 or 0.1 to 0.3), and none (-0.1 to 0.1).
[b] Usage based on the two key metrics described above: average user occupancy and proportion of time in use.

SUMMARY

Investigating the utility and function of parklets has many factors to consider. Some of these were discussed in this chapter, including those related to total usage, user diversity, dominant activities, and social dynamics. Recognizing the variety of factors at play, the results have been summarized in the table below to provide a snapshot of performance based on established metrics. The metrics can be traced by column, which employs a color scheme to track differences between the different sites. The darker the color, the higher the value on that particular measurement. For the purposes of this table, the higher value corresponds to what is considered a desirable quality of public space.

These metrics represent only some of the many ways the data were analyzed for this report. These select few metrics were chosen for their meaningfulness in assessing parklet usage across a variety of dimensions, in order to present a brief, yet well-rounded understanding of these spaces. A full list of metrics and results can be found in Appendix H.

Table 8. Select Metrics Summary Across Sites

PARKLET SITE	OCCUPANCY SCORE	PERCENT OF TIME IN USE	MEDIAN DWELL TIME	OCCUPANCY SCORE PER 100SQFT OF PARKLET SPACE	AVERAGE GROUP SIZE	PERCENT ENGAGED IN SOCIAL ACTIVITIES	PERCENT MINORITY USER	PERCENT OF PEDESTRIANS WHO USE THE SPACE	PERCENT OF USERS WHO PURCHASE SOMETHING FROM HOSTING BUSINESS
Chromer Building	0.58	26%	10	0.08	1.60	67%	46%	1%	2%
Cortona Café	0.34	20%	4	0.07	1.37	65%	29%	4%	28%
Molly Moon's	2.21	66%	9	1.75	2.07	83%	25%	7%	75%
Montana Bar	4.08	47%	14	2.43	2.33	91%	17%	5%	70%
Some Random Bar	5.08	60%	50	1.25	2.10	97%	2%	2%	85%
Terry Ave	0.16	13%	1	0.06	1.15	28%	12%	2%	N/A
Tin Umbrella	0.33	17%	8	0.13	1.60	56%	20%	4%	63%
U District	2.28	80%	6	0.89	1.46	63%	29%	2%	16%
Uptown	1.51	84%	7	0.51	1.29	51%	18%	1%	18%

CHAPTER 5: CONCLUSIONS

As of June 2016, ten local businesses and community organizations are in the process of applying for parklet and streatery permits, which would effectively double the current number of parklets in the near future. With three additional streateries scheduled for construction in summer 2016, this research presents a timely opportunity to understand how the spaces currently function. Beyond that, these results can be a starting point from which SDOT can have conversations to clarify program goals and the types of spaces they hope for this program to foster. This research provides tested methods for measuring usage and establishing thresholds of parklet performance based on program values and goals. These thresholds in turn may be used to evaluate existing projects to determine if a site is a success, as well as bolster our understanding of what external factors can predict success in the future.

PRIORITIZING VALUES TO GUIDE FUTURE PROGRAM DELIVERY

The metrics I developed were approved by SDOT and are meant to help inform future program planning and implementation. However, as it currently stands, they are simply useful measurements. The metrics depict different types of spaces with different functions and user profiles, as discussed in the previous section. One of the key takeaways from this research is that not all use functions equally. Since parklet performance depends on what dimension of usage is measured, there are a number of ways “success” can be interpreted based on these observation data. The meeting in February between myself and SDOT staff identified the fact that there were no particular value thresholds for any metric for which a site would be considered a “success” or

"failure" simply because staff do not know how these spaces function beyond anecdotal evidence. Thus, this research serves a vital role as a pre-evaluation existing conditions report to help staff understand how parklets currently function and the wide range in performance based on different metrics. From this knowledge, SDOT staff can begin the process of making future decisions related to developing clear, measurable goals and more robust, informative evaluation processes by which to measure these goals. This can then inform outreach, site selection, design review, and program implementation in order to encourage the types of spaces that exhibit the most desirable characteristics.

There are a number of questions that this research has identified that could be of use for SDOT to consider when further defining goals and establishing an evaluation practice for the Parklet Program and Streatery Pilot Program, including:

Absolute usage or context-specific usage. Is the absolute number of individual users important, or should results be interpreted in a way that scales them to the local conditions at hand? In other words, should those sites that have low overall usage not be discounted, assuming it matches the pace of the local context? Or is there a minimum number of people that need to use these spaces for it to be considered a success and a valid, viable use of right-of-way?

Types of measures for assessing context-specific usage. If usage analysis that is scaled to the surrounding context is important to SDOT, what specific aspect of the context should be used for comparison? This thesis looked at usage compared to pedestrian volume, residential density, and square footage of structure. Are there other measures that should be considered?

Comparison to alternatives. Considering the fact that permitting parklets and streateries is only one part of a larger conversation at SDOT regarding the best, most appropriate, and most equitable use of curb space, staff should consider framing site-level evaluations in terms of other alternatives at hand. For instance, should there be a way to compare parklet usage to the counterfactual scenario—in other words, parked vehicles—in order to justify or assess the cost-benefit of this intervention? SDOT could compare the occupancy score developed in this thesis to the parking occupancy studies conducted in neighborhoods where these parklets are located in order to assess relative occupancy between different uses of the curb, to understand if parking space or public space is in greater demand locally.

Classifying valid or desirable types of parklet usage. Does the quality and character of the parklet usage matter? Do particular qualities of parklet use register as more desirable than others? Do the types of activities serve as valid indicator of when a space functions more as a community place? Should SDOT be concerned specifically with the sociability of sites, considering the City of Seattle's stated goal of creating "public spaces that foster social interaction," as described in the most recent 2035 Comprehensive Plan draft (City of Seattle, 2016, p. 72)?

Defining acceptable thresholds for user diversity. Does user diversity matter? Does demographically diverse usage actually equate with a sense of inclusivity and accessibility, and thus the success of the parklet idea as a public space?

RECOMMENDATIONS

This thesis represents the most robust research conducted to date on parklets and streateries in Seattle. Ultimately, the results are meant to aid SDOT in their efforts to define the long-term goals of and vision for the program, to prioritize metrics for determining site-level success, and to continue conducting meaningful assessments of the spaces. I have identified recommendations that SDOT should consider in the future to round out SDOT's understanding of parklet and streatery function and more effectively manage the program for the public.

1. Clearly define which of the proposed metrics will serve as indicators for success. SDOT should seriously consider the range of questions posed in the previous section as soon as possible. Firm direction for each of these decision points will allow SDOT staff to clearly articulate the goals of the program and how it should be evaluated in the future. By operationalizing these program goals and values into a few key metrics that can serve as indicators of parklet and streatery success—like those established for this thesis—SDOT can establish a robust evaluation practice to guide the program into the future.

2. Determine if establishing acceptable thresholds for usage is an appropriate approach to program management. Once program goals and values are clarified, SDOT should determine if there are certain thresholds for usage metrics above which staff would consider a particular parklet a "success." By establishing clear, measurable expectations for parklet usage, SDOT could outline a method of assessing if sites should be eligible for annual permit review based on their performance. SDOT might not want to be this prescriptive with its expectations for parklet usage at this point, but there is a foreseeable future in which staff will need to be discerning about which sites are initially

approved and renewed. For this reason, SDOT should at least consider this as a tool for program management in the coming years.

3. Clarify the difference between parklets and streateries from an evaluation perspective. These results have highlighted the fact that parklets and streateries function as very different spaces, serving different purposes and exhibiting their own patterns of usage. Considering the fact that streateries do not appear to function as true public spaces, SDOT should establish separate evaluation criteria to better align with the Streatery Program goals related to economic development and pedestrian sidewalk activation. SDOT should also determine if streateries should be evaluated using the same criteria as those used for parklets in those hours in which they are open to the public. If, in fact, SDOT would like to evaluate streateries also on their public function, now would be a critical juncture for the program to consider what interventions might be possible to encourage more use from non-customers.

4. Investigate the perceived public-ness of various spaces and make appropriate changes to the design guidance or outreach processes. Building off of the previous recommendation, more research should be conducted on the public's perceptions related to the "public-ness" of these spaces. There is an opportunity to advance SDOT's knowledge of why streateries lack any sort of meaningful public function in terms of usage during non-business hours. There could be a number of reasons for this, including the fencing requirements from the Washington State Liquor and Cannabis Board, possible public conflation with the city's sidewalk café program (which closes part of the sidewalk to the public all the time for private use by a restaurant or bar), lack of adequate signage, or simply the implementation of designs that do not accommodate

diverse users and functions due to their first and foremost focus on delivering space for table service. SDOT should find ways to balance the needs of the public and private functions of streateries through simple design interventions without risking the economic viability of the space for the hosting businesses.

There is also some evidence to suggest that some parklets could also be perceived to be private spaces, as indicated by the high proportion of users who were also customers of the hosting business. I have concerns that some of these sites could appear to the casual passersby to be private spaces for the exclusive use of customers of the hosting businesses, which would betray the goal of these spaces in being public and available for all to enjoy.

Future surveys should include questions related to this perception of public-ness, as well as offering opportunities for survey respondents to suggest ways to improve the public intent of these spaces through signage, parklet design, activation, or methods of increasing awareness.

5. Conduct research on the economic impact of parklets and streateries. Although the surveys of pedestrians, parklet/streatery users, hosting businesses, and local businesses already conducted by SDOT staff have all attempted to characterize parklets' influence on purchasing behaviors, they are by no means definitive in connecting parklets and streateries to a notable increase in sales for the hosting businesses and surrounding district. For one, many local businesses reported having a difficult time isolating the parklet's specific impact on their business or the health of the overall business district. Since economic development is one of SDOT's main justifications for using public space for private use and one of the stated goals for the Parklet Program and Streatery Pilot

Program, it will be important to tease out this relationship with further research. In particular, since streateries do not necessarily fulfill their potential as public spaces, it is even more critical to understand if they are in fact performing well as economic development tools. These questions should be addressed through a mixed method research design, focusing on how these spaces impact passersby purchasing decisions through surveys, as well as analysis of local sales data. It would be worth partnering with the hosting business to have them administer the surveys directly to their customers, rather than using exclusively SDOT staff.

6. Refine observational research techniques. Using the research design developed for this thesis, SDOT should consider continuing the collection of observation data in order to understand if these initial findings are truly representative of usage at large. More data will build the robustness of our knowledge about these spaces, and allow us to have more confidence in a correlational analysis to understand external factors affecting usage, like the one proposed in Table 8 in Chapter 4. If SDOT staff does collect more data, they can consider collecting data only during peak usage times (typically 11am-1pm and 4-6pm) in order to limit the time needed in the field. Also, SDOT should consider including hours outside of those used in this study based on the function of the hosting business. For instance, the three parklets located outside of coffee shops (Cortona Café, Tin Umbrella, and U District) could be observed earlier in the day, while streateries could be observed further into the evening. By focusing efforts in the summer months rather than spring as was done for this thesis, SDOT could more easily compare results to those conducted by other cities, since that is the typical season in which parklet studies are conducted.

Although the research design used in this thesis proved to be successful, there are some small improvements that should be made to the instruments. For instance, SDOT should adapt the activity mapping form to be directly associated to the observation form. This way, it would be possible to attach activities to their direction facing and spatial orientation within the parklet. It was difficult to glean meaningful information from the activity mapping exercise in its current form for this thesis.

7. Conduct pre- and post-installation studies. For the new parklets and streateries currently under review, SDOT should consider collecting some baseline data through observations, pedestrian counts, and pedestrian surveys to understand existing conditions of the block face on which the new installations are to be constructed. By comparing this pre-installation information to those comparable data collected after installation, SDOT will be able to capture the true *impact* of parklets and streateries. The LADOT People St Evaluation Manual suggests this pre- and post-installation research design in order to understand the impact of these new spaces, rather than just characterizing their function ("People St Project Evaluation Manual," n.d.).

8. Develop a system for on-going monitoring, including observations and surveys. If SDOT has the resources to devote to data collection throughout the year, it would be worth developing an on-going monitoring plan. This would mean that observation data would be collected on a regular basis (e.g., monthly, quarterly) for each site, in order to understand usage throughout the course of the year. This could be supplemented with pedestrian and user surveys to get a well-rounded understanding of usage of perceptions of the space. It would be worth also conducting observations if any significant changes occur on the block face, such as business turnover or new infrastructure, to see if parklet

function changes as a result. This type of longitudinal research would be particularly insightful in neighborhoods that appear to be in the midst of rapid change and demographic shifts. For instance, the neighborhood in which the Tin Umbrella parklet is located—Hillman City—is experiencing substantial growth and investment. On the southern edge of the thriving Columbia City neighborhood, Hillman City is party to its spillover economic effects, resulting in what The Seattle Times has deemed as a veritable "rebirth" (Large, 2015). This parklet in particular will be an important one to monitor for those metrics related to user diversity, to ensure that all members of the neighborhood are drawn to the space, not just wealthy newcomers or visitors. By focusing resources on those sites that exhibit changing social and economic contexts—particularly those that are indicative of larger forces of gentrification and displacement—site observations and surveys would help bolster staff understanding of external factors affecting usage.

REFLECTION

This thesis project aligns well with my original motivation for entering graduate school: applying my academic and professional background in research methods and evaluation to a topic of interest in urban planning. In part, I intend for this research to highlight the critical role of having data during the decision-making process and what tremendous insight can be gleaned from even small amounts of data that are reliably collected. It was rewarding to not only collect new information on a burgeoning phenomenon that had never before been studied in Seattle to this degree, but to also apply that context to the larger urban planning and design literature. In most ways, the central concepts and theories were found to be relevant in parklet observation, but there were instances in which this new scale of space broke convention (e.g., Gehl's understanding of typical

interpersonal distances in public spaces, treatment of “undesirables”). This project to me underscores the importance of collecting data and not relying entirely on existing theory to dictate the perceived success of the initiative, particularly when the unit of analysis takes a different form or scale, like the parklet.

I found this project to be particularly compelling for the variety of conflicts, challenges, and anxieties of modern society that can all be found in the example of the parklet: homelessness, displacement, private entities’ use of public space, shift from single-occupancy vehicle mobility, and placemaking. I see parklets as something of a harbinger of a larger effort to correct the issues of past planning practices and bring life and activity back to the street. It is thus important that those managing the program be aware of multitude of conflicts at play in order to thoughtfully guide the program’s direction in the future.

What remains to be seen is how a program with finite resources that only continues to grow will be able to collect the amount of observational data necessary to have an accurate understanding of parklet usage and the surrounding context that shapes the function of each site as a public place. This was my first foray into in-depth observational research, and I was surprised to realize how time-consuming this type of research is. Despite the 144 hours in the field in total, I was still left with the feeling that this is only but a brief sample of the larger picture. My hope is that this thesis can provide some useful suggestions as to how to reconfigure and refine evaluation practices to ensure the program is meeting the city’s larger goals and vision.

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APPENDIX A: SITE OBSERVATION FORM

PARKLET SITE OBSERVATIONS

Location: | Date: | Temperature: | PAGE ___ OF ___

Surveyor: | Day of week: | Weather:

	time			gndr		race/ethnicity						age						posture						activities								social			nusiance								
number	Arrival time	Departure time	group size	male	female	white	black	asian	latino/a	native american	unsure/don't know	<6 years	7-17 years	18-34 years	34-50 years	50-64 years	65+ years	standing	sitting formal	sitting informal	leaning	lying down	mobility issues	eating/drinking	using electronics	talking on phone	reading/writing	hanging out	accompanied by pet	talking to others	arrived with others	met up with others	interact with stranger	smoking	intoxicated	sleeping	panhandling	amplified sound	purchase from host?	purchase from block?	generate trash?	clean up trash?
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Notes:

APPENDIX B: ACTIVITY MAPPING FORM

2. ACTIVITY MAPPING

Location:

Surveyor:

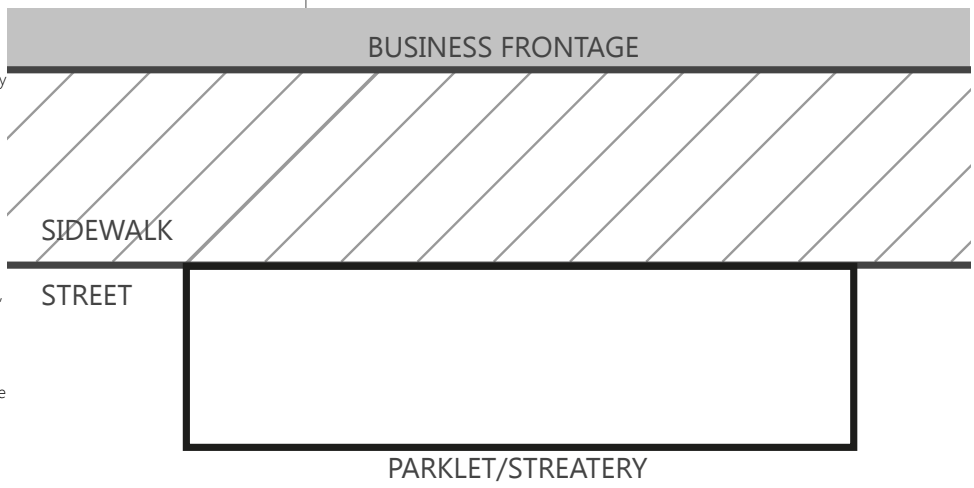
Date:

Day of week:

Please roughly sketch out the parklet/ streatery space with any noteworthy furniture, entrances to nearby business, street trees. Add symbols to represent where stationary activity happens.

If multiple people use the same space over the course of your shift, include tally of number of these activities.

For each user, please also tally using the table below which direction they are facing (sidewalk, street, or interior of parklet).



		Facing sidewalk ↑	Facing street ↓	Facing interior → ←	Total Count	Notes
⊥	standing					
ㅏ	sitting formal (on chair)					
ㄱ	sitting informal (ground/other)					
∠	leaning					
—	lying down					
o	mobility concerns (wheelchair)					

APPENDIX C: PEDESTRIAN TALLY FORM

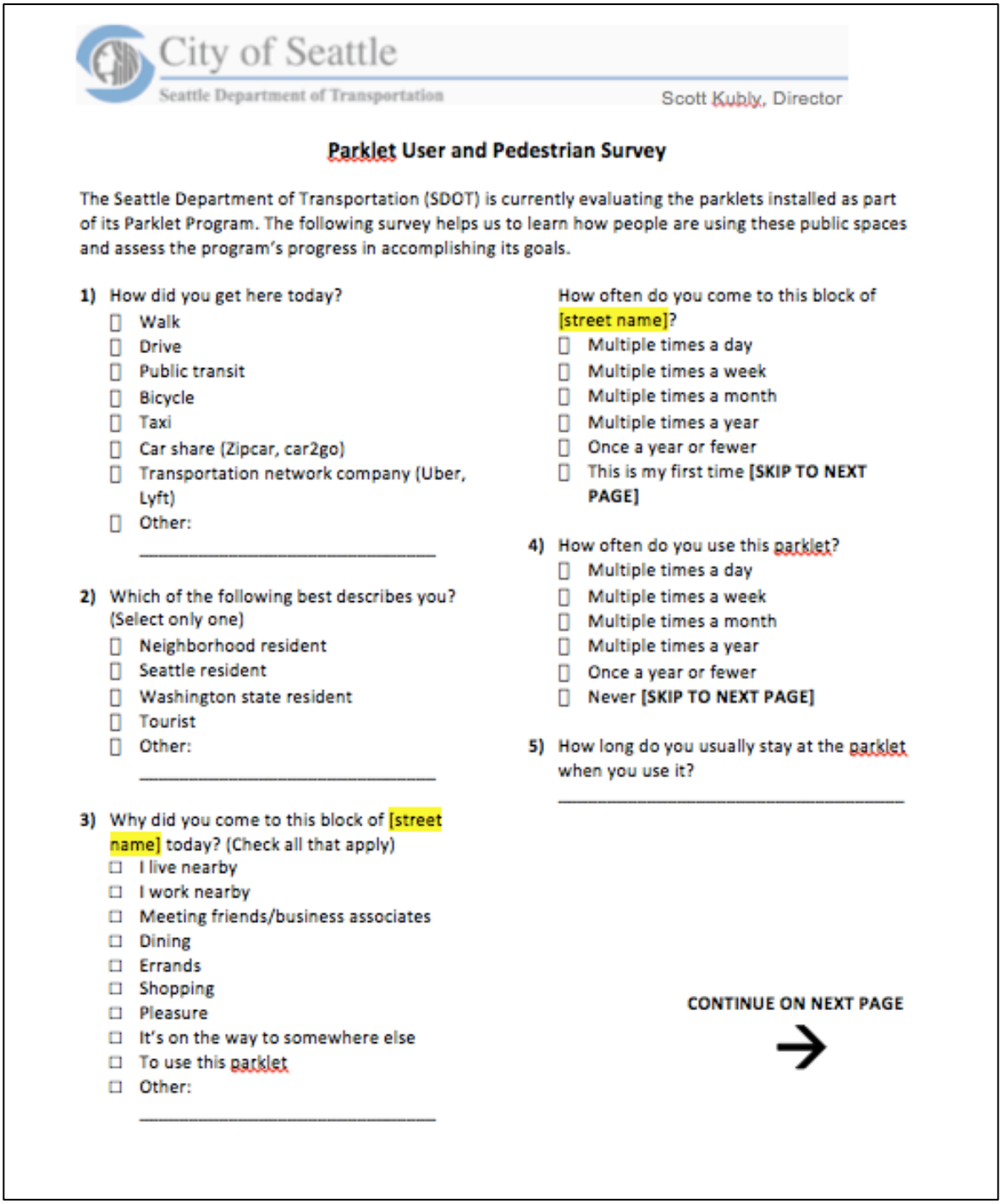
PEDESTRIAN COUNTS

Location:
Surveyor:

Date:
Day of week:

7:05 - 7:15AM	9:05 - 9:15AM
7:25 - 7:35AM	9:25 - 9:35AM
7:45 - 7:55AM	9:45 - 9:55AM
8:05 - 8:15AM	10:05 - 10:15AM
8:25 - 8:35AM	10:25 - 10:35AM
8:45 - 8:55AM	10:45 - 10:55AM

APPENDIX D: INTERCEPT SURVEY



City of Seattle

Seattle Department of Transportation — Scott Kubly, Director

Parklet User and Pedestrian Survey

The Seattle Department of Transportation (SDOT) is currently evaluating the parklets installed as part of its Parklet Program. The following survey helps us to learn how people are using these public spaces and assess the program's progress in accomplishing its goals.

1) How did you get here today?
- ☐ Walk
- ☐ Drive
- ☐ Public transit
- ☐ Bicycle
- ☐ Taxi
- ☐ Car share (Zipcar, car2go)
- ☐ Transportation network company (Uber, Lyft)
- ☐ Other: _____

2) Which of the following best describes you? (Select only one)
- ☐ Neighborhood resident
- ☐ Seattle resident
- ☐ Washington state resident
- ☐ Tourist
- ☐ Other: _____

3) Why did you come to this block of [street name] today? (Check all that apply)
- ☐ I live nearby
- ☐ I work nearby
- ☐ Meeting friends/business associates
- ☐ Dining
- ☐ Errands
- ☐ Shopping
- ☐ Pleasure
- ☐ It's on the way to somewhere else
- ☐ To use this parklet
- ☐ Other: _____

How often do you come to this block of [street name]?
- ☐ Multiple times a day
- ☐ Multiple times a week
- ☐ Multiple times a month
- ☐ Multiple times a year
- ☐ Once a year or fewer
- ☐ This is my first time **[SKIP TO NEXT PAGE]**

4) How often do you use this parklet?
- ☐ Multiple times a day
- ☐ Multiple times a week
- ☐ Multiple times a month
- ☐ Multiple times a year
- ☐ Once a year or fewer
- ☐ Never **[SKIP TO NEXT PAGE]**

5) How long do you usually stay at the parklet when you use it?

_____

CONTINUE ON NEXT PAGE

→

City of Seattle

Seattle Department of Transportation — Scott Kubly, Director

6) Please indicate your opinion on the following statements.

	Strongly disagree	Disagree	No opinion	Agree	Strongly agree
This parklet provides a useful neighborhood public space	☐	☐	☐	☐	☐
This parklet contributes to a sense of neighborhood character and identity	☐	☐	☐	☐	☐
This parklet makes me more likely to visit this street	☐	☐	☐	☐	☐
This parklet makes the neighborhood feel safer	☐	☐	☐	☐	☐
This parklet is a place where it's easy to meet and talk to others	☐	☐	☐	☐	☐
Parklets are a good use of parking space	☐	☐	☐	☐	☐
More parklets should be built in Seattle	☐	☐	☐	☐	☐

7) Do you have any additional comments about this street or the parklet?

For parklet users only:

8) Did you make any purchases during your visit to the parklet?

- o Yes
- o No

For SDOT staff use only:

☐ Pedestrian ☐ Parklet user

Date:_____ Time:_____ ☐ weekday ☐ weekend

APPENDIX E: VOLUNTEER TRAINING PACKET

PARKLET & STREATERY PUBLIC LIFE STUDY

Spring 2016

Thank you for volunteering to help with this study! Your support will make it possible to collect complete data across all ten parklets/streateries to help us compare performance and describe differences in how these sites function as public spaces. Your time is very much appreciated.

While in the field for your four-hour shift, you will be collecting a variety of data at one of the parklets/streateries. This packet outlines these four data collection tasks and their associated documents, with specific instructions on how to complete them. The components of the public life study research you will be assisting with today include:

1. Site observation form
2. Activity mapping
3. Pedestrian counts
4. Site observation summary

You are asked to keep an eye on the parklet for the entirety of your shift, so please prepare accordingly. It would not be a bad idea to be prepared with water and snacks. If at all possible, please do not use the parklet/streatery while collecting data, since your presence can influence how other people use the space. I know this might be a little bit awkward, hovering near the parklet/streatery or across the street, maybe even with a clipboard. Please use your discretion in terms of what makes the most sense, do what feels most comfortable, and take breaks in the parklet/streatery when needed.

If any concerns arise at any point before, after, or in the field, do not hesitate to reach out.

THANK YOU!

1

1. SITE OBSERVATIONS FORM

This is the most important component of the study, since the data collected on this form will allow us to make cross-site comparison. For this central task, you will be documenting all stationary activity that occurs within the parklet/streatery during your four-hour shift. This means that you should be aware of the activities within the parklet/streatery the entire time you are in the field for your shift.

For each person or group that uses the parklet/streatery, you are going to document some information about them, including: their arrival and departure times, a best guess of demographic information, their postures, and the activities they engage in while in the parklet/streatery. Each of these elements are listed in the columns. Below are some of these element for which you will be documenting data that might not be straightforward and need further explanation.

Column	Definition/Description
Demographics (gender, race/ethnicity, age)	Simply attempt to characterize the demographics of the parklet user as best you can. If you are uncomfortable guessing, just write in "?"
Postures	
Sitting formal	Sitting on provided furniture, such as chairs and benches
Sitting informal	Sitting on surfaces not designed for sitting, such as ground
Mobility issues	Document if user has wheelchair, walker, or something to help them move
Activities	
Reading/Writing	Reading and writing either with paper or electronic (e.g., laptop) media
Using electronics	Using smartphone, tablet, or music player; if using laptop, document that as reading/writing.
Hanging out	This is reserved for people who do not appear to be engaged in any specific activity, but are simply enjoying the space
People watching	This is reserved for people who are actively watching passersby, and who orient their position to face the sidewalk
Talking to others	Anyone who speaks with another person during their stay in the parklet should be noted here; additional detail should be provided in the next three columns
Social	
Arrived with others	Multiple people arrive together, share the same space, and talk to one another
Met up with others	People who appear to know each other meet at the parklet; implies that parklet is being used as a landmark for meeting up
Interact with stranger	If during any point in the visit, the user interacts with a stranger
Nuisance	
Amplified sound	If the user has device that projects noise so that others can hear it
Purchase from host?	If the user has purchased something from the business/organization directly outside the parklet

Purchase from block?	If the user appears to have purchased something from another business on the block; an example might be eating take-out from a restaurant down the street
Generate trash?	If the user generates trash during their visit; an example might be purchasing/bringing in a coffee with disposable coffee cup
Clean up trash?	If the user cleans up either their own trash or cleans up trash that was already present; please make note when people generate their own trash and leave it behind

I encourage you to fit the activities you are seeing as best you can within these definitions, but please do not hesitate to add additional notes to explain what you are seeing. This list is by no means comprehensive, so any additional detail you can provide is helpful. There is a "Notes" section at the bottom of each sheet for this purpose. If describing a specific user, please use the associated number identifier to ensure the note can later be connected to the correct person.

When conducting observations, please pay particular attention to social interaction. You'll notice that there are three columns asking you to describe the nature of the social interaction. Additionally, you'll be asked to provide details about these interactions in the third component of the research (Site Observation Summary).

It's important to note that you can document multiple activities. Do not feel like you need to assign each user one activity. We want to know the range of activities every individual is engaged in! For groups of people using the parklet/streatery, you should document their activities within the same row. An example of what this looks like can be found below.

1. PARKLET SITE OBSERVATIONS

Location:
Surveyor:
Date:
Day of week:
Temperature:
Weather:
PAGE ___ OF ___

	time			gndr		race/ethnicity						age						posture						activities								social			nuisance							
number	Arrival time	Departure time	group size	male	female	white	black	asian	latino/a	native american	unsure/don't know	<6 years	7-17 years	18-34 years	34-50 years	50-64 years	65+ years	standing	sitting formal	sitting informal	leaning	lying down	mobility issues	eating/drinking	using electronics	talking on phone	reading/writing	hanging out	people watching	accompanied by pet	talking to others	arrived with others	met up with others	interact with stranger	smoking	intoxicated	sleeping	amplified sound	purchase from host?	purchase from block?	generate trash?	clean up trash?
1	1:46	2:01	1		1			1									1		1					1			1													1	1
2	1:58	2:10	1	1		1								1					1						1	1															
3	2:25	2:41	3	1	2	1	1				1			2	1			1	2											3	3								2		2	2
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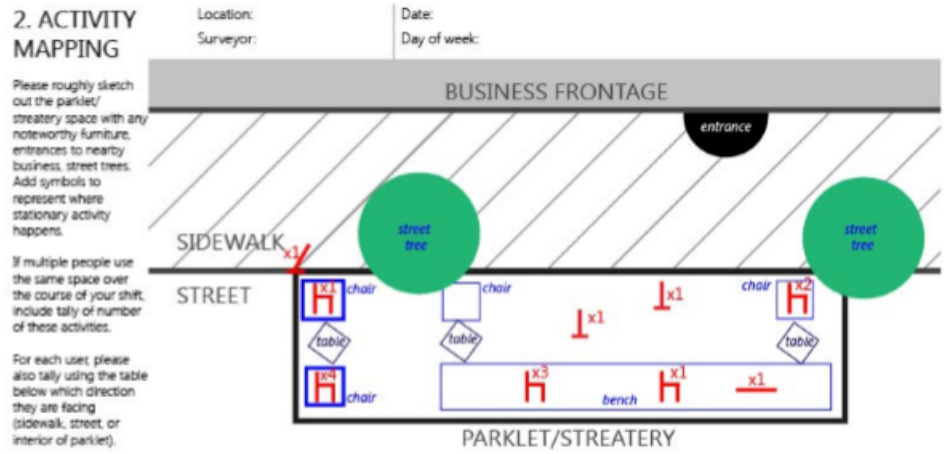
Notes:
No3: three came together, but one standing left at 2:34.

4

2. ACTIVITY MAPPING

For each person who is stationary within the parklet/streatery, you will document where they were located and what their posture was. Understanding that multiple users will likely use the same furniture over the course of your shift, you may add tallies by seating elements to document how many used that particular piece of furniture. Please also be aware of which direction the user is facing, and document that in the tally box at the bottom of the sheet. The "facing interior" option means that the user is oriented toward the center of the parklet. Below is an example of the completed form.



		Facing sidewalk	Facing street	Facing interior	Total Count	Notes
⊥	standing	1	1		2	Moved around a lot, but mostly facing street
⊢	sitting formal (on chair)	8	2	1	11	
⌝	sitting informal (ground/other)					
∠	leaning	1			1	
—	lying down	1			1	lying on side, facing sidewalk
o	mobility concerns (wheelchair)					

5

3. PEDESTRIAN COUNTS

Three times every hour, you will be tallying the number of people who use the sidewalk directly adjacent to the parklet/streatery. Find a place where you can stand out of the flow of foot traffic, safe from vehicles, and where you have a good sightline. Imagine a line running width-wise across the sidewalk. Document all people who walk/run/or otherwise pass that imaginary line going either direction on the sidewalk. Don't forget:

- ✓ People being carried by someone else walking (such as small children)
- ✓ People in wheelchairs
- ✓ People on skateboards
- ✓ People walking dogs

Using the Pedestrian Counts sheet, tally the foot traffic for each 10-minute slot every hour (12 total counts per shift).

4. SITE OBSERVATIONS SUMMARY

Before beginning your shift, please read through these questions regarding the elements of site observation that could not be documented in the other forms. During your shift, feel free to add notes to this sheet, or take five minutes to answer them at the end. This will help us understand the details of the parklet visits of interest to the study.

APPENDIX F: OBSERVATION SUMMARY FORM

4. SITE OBSERVATION SUMMARY

Before beginning your shift, please read through these questions regarding the elements of site observation that could not be documented in the other forms, since it includes things to be thinking about when conducting observations.

In general, how clean and well-maintained does the parklet appear?

Did you see any instances of stationary activity spilling over into the sidewalk from the parklet? Please describe.

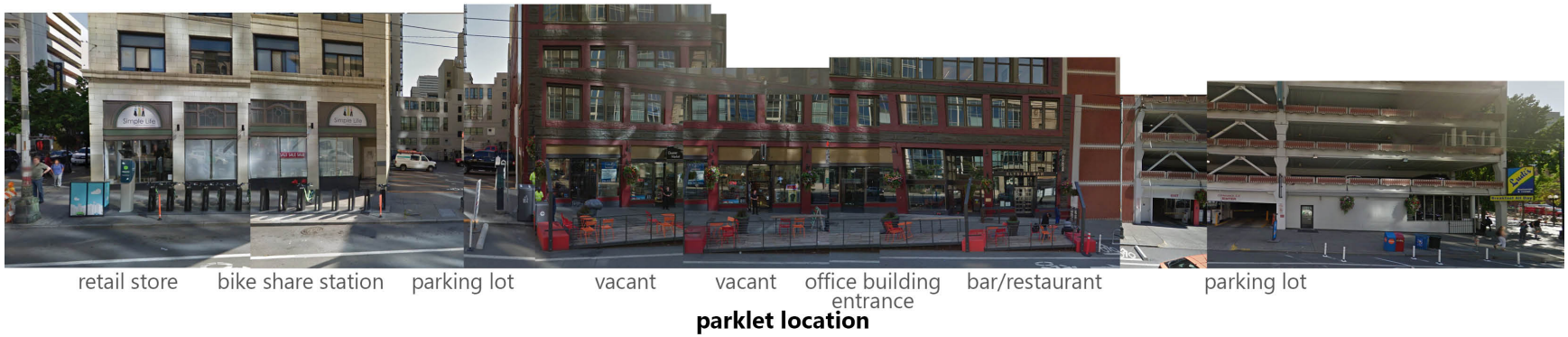
For those instances in which parklet/streatery users spoke with strangers, what inspired the interaction?

When more than one group used the site at the same time, did they interact at all or ignore each other? How far apart did they typically sit?

Do you have any other comments/observations that were not already documented?

APPENDIX G: PHOTOS OF PARKLETS

Figure 31. Chromer Building Parklet on 2nd Ave Between Pine St and Pike St (Facing East)



Source: Google Maps Street View; images compiled by author

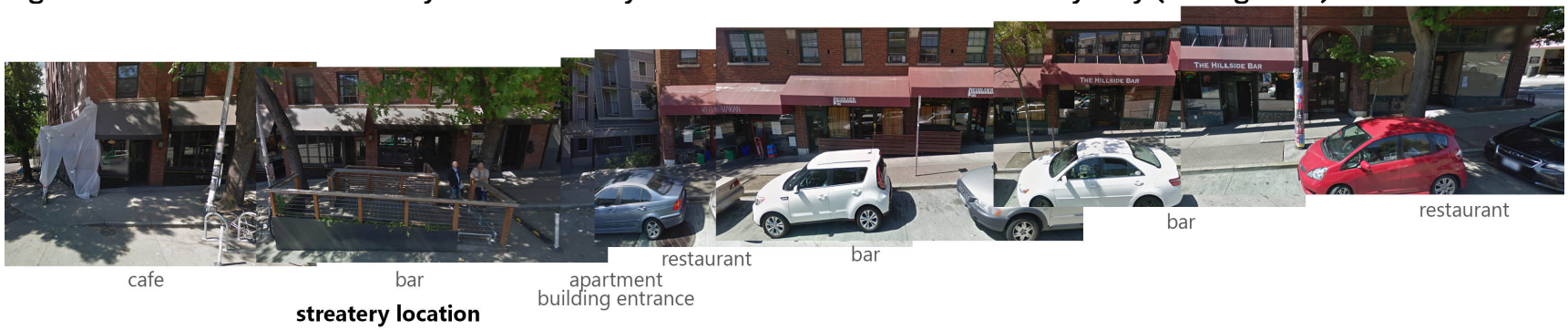
Figure 32. Cortona Café Parklet on E Union St Between 24th Ave and 25th Ave (Facing South)

Source: Google Maps Street View; images compiled by author

Figure 33. Molly Moon's Parklet on N 45th St Between Woodlawn Ave N and Densmore Ave N (Facing North)

Source: Google Maps Street View; images compiled by author

Figure 34. Montana Bar Streatery on E Olive Way Between E Howell St and E Denny Way (Facing West)

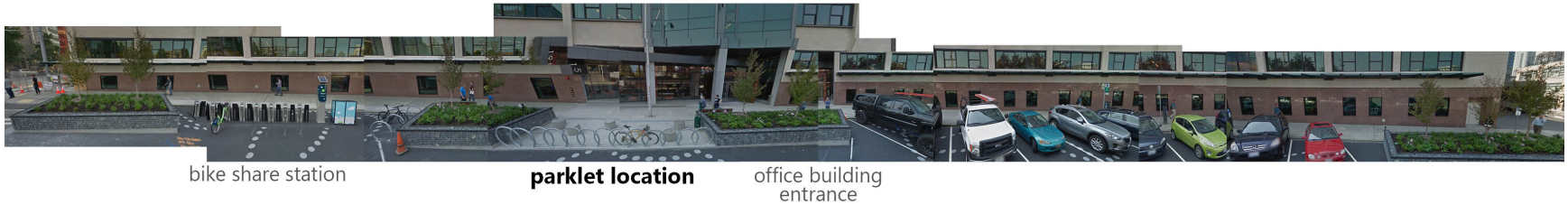


Source: Google Maps Street View; images compiled by author

Figure 35. Some Random Bar Streatery on 1st Ave Between Vine St and Cedar St (Facing East)

Source: Google Maps Street View; images compiled by author

Figure 36. Terry Ave Parklet on Terry Ave Between Virginia St and Stewart St (Facing West)

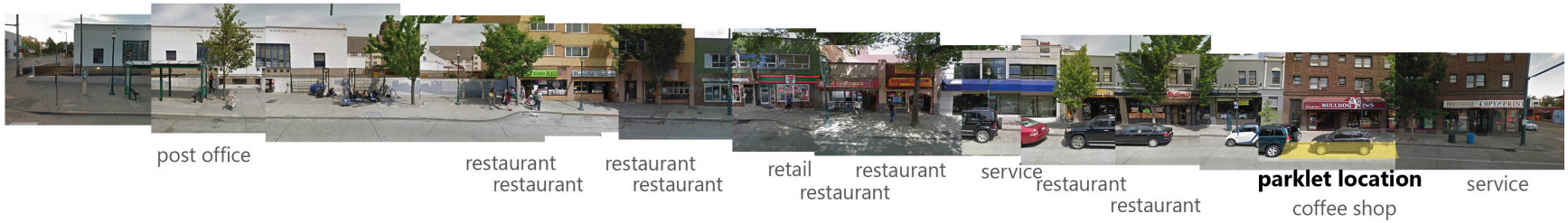


Source: Google Maps Street View; images compiled by author

Figure 37. Tin Umbrella Parklet on Rainier Ave S Between S Findlay St and S Orcas St (Facing East)

Source: Google Maps Street View; images compiled by author

Figure 38. U District Parklet on University Way NE Between NE 42nd St and NE 43rd St (Facing East)



Source: Google Maps Street View; images compiled by author

Figure 39. Uptown Parklet on Queen Anne Ave N Between W Republican St and W Mercer St (Facing West)

Source: Google Maps Street View; images compiled by author

APPENDIX H: COMPLETE PERFORMANCE METRICS

Table 9. Performance Metrics Results

	METRIC	PARKLET / STREATERY								
		CHROMER BUILDING	CORTONA CAFE	MOLLY MOON'S	MONTANA BAR	TERRY AVE	SOME RANDOM BAR	TIN UMBRELLA	U DISTRICT	UPTOWN
Category: Use										
1	Total number of users	73	38	249	104	46	96	30	190	41
2	Occupancy Score*	0.58	0.34	2.21	4.08	0.16	5.08	0.33	2.28	1.51
3	Total number of use-minutes*	253	145	964	1941	66.57	2402	146	978	706
4	Ratio of use-minutes to total time surveyed*	0.53	0.30	2.01	4.04	0.14	5.00	0.30	2.04	1.47
5	Average number of new users per hour*	3.25	1.88	12.11	7.14	2.82	5.09	1.39	11.50	2.43
6	Minimum number of new users per hour	0	0	1	0	0	0	0	4	0
7	Maximum number of new users per hour	20	8	41	21	9	17	10	31	7
8	Maximum number of *users* at one time	15	4	13	23	3	16	4	10	5
9	Maximum number of *groups* at one time	3	4	3	9	3	6	2	6	3
10	Percent of time parklet is in use*	26%	20%	66%	47%	13%	60%	17%	80%	84%
11	Percent of time parklet is in use when hosting business is open*	26%	27%	72%	93%	N/A	94%	16%	N/A	69%

12	Percent of time parklet is in use when hosting business is closed*	N/A	14%	24%	19%	N/A	24%	19%	N/A	92%
13	Raito of average number of users compared to surrounding residential density	0.0054	0.0035	0.0195	0.0019	0.000010	0.0032	0.0032	0.0060	0.0040
14	Percent of passersby that use the space*	1.44%	3.96%	6.70%	4.68%	2.41%	2.42%	3.64%	1.59%	1.24%
15	Maximum percentage of total seating capacity occupied	48%	44%	186%	288%	27%	89%	44%	100%	31%
16	Ratio of Occupancy Score to seating capacity*	0.01862	0.03730	0.31551	0.50982	0.015	0.28230	0.03635	0.22814	0.09438
17	Occupancy Score per 100 sqft of parklet space*	0.08038	0.06951	1.75283	2.42772	0.05818	1.24545	0.12779	0.89118	0.53929
18	Median amount of time spent at parklet per user (minutes)	10	4	9	14	1	50	8	6	7
19	Average amount of time spent at parklet per user (minutes)*	10	8	10	32	3	61	18	10	37
20	Median amount of time spent at parklet per group (minutes)	9	4	7	12	1	44	7	6	8
21	Average amount of time spent at parklet per group (minutes)*	10	8	10	33	3	55	14	11	42
22	Maximum amount of time spent at the parklet	52	48	61	129	20	177	27	109	365
23	Minimum amount of time spent at the parklet	1	1	1	1	1	2	2	1	1
Category: User Diversity										
24	Percent of users over 65 years old*	2%	0%	0%	1%	0%	1%	0%	4%	12%
25	Percent of users under 18 years old*	2%	6%	26%	0%	0%	1%	7%	5%	4%

26	Percent of users who are female*	36%	61%	59%	36%	39%	51%	32%	49%	39%
27	Percent of users who are non-white*	46%	29%	25%	17%	12%	2%	20%	29%	18%
28a	Percent Black*	32%	12%	4%	6%	1%	0%	12%	7%	139%
28b	Percent Asian*	5%	18%	20%	8%	11%	1%	6%	17%	4%
28c	Percent Latino*	8%	0%	0%	4%	0%	1%	2%	2%	239%
29	Percent of users who have mobility challenges*	1%	0%	0%	0%	0%	0%	0%	0%	5%
Category: Activity										
30	Percent of users who sit*	41%	49%	55%	33%	13%	94%	80%	65%	80%
31	Percent of users who face outward toward sidewalk*	31%	65%	48%	14%	27%		43%	43%	47%
32	Percent of users who face inward in parklet*	35%	25%	38%	20%	21%		41%	39%	42%
33	Percent of users who face outward toward the street*	34%	10%	14%	66%	53%		16%	18%	12%
34	Percent of users who eat or drink in the space*	11%	23%	75%	76%	2%	85%	75%	36%	24%
35	Average number of activities per group*	1.36	1.41	2.04	1.90	1.1	1.90	2.54	1.63	1.81
36	Percent of users who generate trash who dispose of own trash*	50%	97%	100%	100%	N/A	N/A	100%	95%	88%
37	Percentage of users who purchase something from hosting business*	2%	28%	75%	70%	N/A	85%	63%	16%	18%
38	Percentage of uses who purchase something from block*	0%	13%	0%	14%	N/A	0%	0%	22%	17%
39	Percentage of users who either purchase something from hosting business or business on block*	2%	39%	76%	76%	N/A	85%	63%	37%	33%

40a	Average length of stay of those who purchase something from hosting business (minutes)*	38	16	11	47	N/A	68	20	23	4
40b	Difference from overall average length of stay*	28	8	0	14	N/A	13	6	13	-38
41	Percent of users engaged in people watching*	8%	1%	13%	6%	2%	0%	14%	11%	15%
42	Percent of users engaged in nuisance behaviors (e.g., smoking, intoxicated, sleeping, panhandling, littering)*	19%	5%	4%	1%	7%	0%	1%	1%	26%
	Percent breakdown of other activities*									
43a	Eating/Drinking	11%	28%	75%	76%	3%	85%	75%	36%	24%
43b	Hanging out	23%	35%	18%	13%	24%	2%	33%	14%	40%
43c	Using electronics	19%	15%	8%	6%	22%	3%	27%	22%	23%
43d	Reading/Writing	0%	0%	0%	0%	5%	4%	12%	12%	4%
43e	Talking on the Phone	13%	6%	0%	3%	14%	0%	13%	6%	4%
	Percentage breakdown of other postures*									
44a	Sitting formally	33%	49%	44%	32%	14%	94%	78%	64%	80%
44b	Sitting informally	8%	0%	10%	0%	0%	0%	1%	1%	0%
44c	Standing	56%	44%	34%	50%	76%	6%	17%	29%	9%
44d	Leaning	2%	12%	15%	24%	11%	0%	4%	5%	5%
44e	Lying down	0%	0%	0%	0%	0%	0%	0%	0%	4%
Category: Site Sociability										
45	Percent of users engaged in social activity: total *	72%	65%	83%	94%	30%	97%	56%	63%	54%
46	Percent of users engaged in social activity: people arriving together*	59%	51%	80%	85%	25%	83%	54%	51%	43%

47	Percent of users engaged in social activity: people meeting up with others*	16%	13%	8%	12%	4%	36%	2%	13%	3%
48	Percent of users engaged in social activity: strangers interacting*	2%	0%	11%	6%	1%	0%	0%	5%	20%
49	Percent of users engaged in *passive* social activities/open behaviors (e.g., hanging out, people watching)*	3%	23%	12%	3%	28%	3%	19%	14%	31%
50	Percent of users engaged in solitary activity/closed behaviors (e.g., using electronics, reading/writing, talking on phone)*	25%	13%	2%	3%	33%	0%	24%	23%	12%
51	Average group size*	1.60	1.37	2.07	2.33	1.15	2.10	1.60	1.46	1.29
52	Percent of *total time observed* that the parklet is occupied by more than one person interacting with each other*	14%	12%	46%	43%	2%	52%	8%	41%	31%
53	Percent of *time in use* that the parklet is occupied by more than one person interacting with each other*	49%	52%	68%	90%	18%	83%	45%	52%	35%
54	Percent of *total time observed* that multiple groups share the parklet*	2%	2%	23%	28%	2%	48%	0%	46%	36%
55	Percent of time in use that multiple groups share the parklet*	4%	6%	34%	60%	27%	77%	1%	55%	44%

* Indicates the metrics for which the *weighted average* statistic is presented. This means that results collected on a weekday were weighted to represent five of seven days of week, while data collected on a weekend day were weighted to represent two days of the week. Thus, this average statistic intends to represent activity for the entire week. This ensures that the weekend averages do not have an outsized influence on the data overall, since although half of all data collected is weekend data, it is intended to represent only a portion of all activity.

To view complete metrics in Microsoft Excel format, click the icon below. This spreadsheet provides results split by weekday and weekend results, instead of exclusively averages, as shown in Table 9 above.

SDOT parklet complete metrics.xlsx