Understanding Food Truck Mobility, Policy, and Social Media Use in Eugene, Boston, and Vancouver

by

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ABSTRACT

Food trucks have become an ever-present amenity in urban centres however they remain understudied in geography. This thesis assessed the relationship between food truck mobility, both physical and technological, as well as policy in Boston, MA, Eugene, OR, and Vancouver, BC. Using data collected from Street Food App over the course of a seven-day period, as well as data from Twitter, movements were mapped an analyzed while also taking into consideration regulations that may prohibit movement. Results demonstrated that Twitter does not appear to be a popular tool in the food truck industry when compared to Street Food App. Further, policy in two of the three cities did indeed inhibit mobility of food trucks.

CHAPTER 1: INTRODUCTION

Forbes estimates the cost of starting a restaurant to be anywhere from \$100,000 to \$300,000 (Farrell, 2007). For many, this is an unattainable dream. After the recession of the late 2000s, many people's food dreams became pipe dreams. Many existing restauranteurs had to abandon their restaurants, some of these restauranteurs took inspiration from hot dog and taco stands and took to selling their food on the street (Wessel, 2012; Anenberg & Kung, 2015). A large part in the success of the gourmet street food movement was due to Roy Choi, a classically trained chef working in LA's top restaurants. In the late 2000s Choi sought his own restaurant but realized he was among the many budding entrepreneurs who fell victim to the recession. To offset costs, Choi opened his own taco truck with Korean influence. Choi quickly faced opposition from the gourmet food world for turning to a "roach coach" as his primary means of business, but even more quickly did he disprove the critics (Starchefs, n.d.). Many would say that Roy Choi singlehandedly created the gournet food truck industry as we know it today (LaPorte, 2014). Choi's success has even spurred inspiration for the hit movie Chef, wherein leading actor Jon Favreau learnt the ins and outs of the business alongside Roi Choi. Throughout this movie, which is based on Choi's experiences, social media is placed at the centre of the plot, essential to the success of the food truck. The rise of the gourmet food truck was a perfect storm of restauranteurs seeking a cost-effective solution and the ability to quickly broadcast locations to fans as social media took off around the same time. The mobility of food trucks, in tandem with instant, widespread communication, eliminated the need for a permanent address (Wessel, 2012). The gourmet food truck is a phenomenon that can be seen across North America, with many brick-and-mortar restaurants owners pivoting to the mobile kitchen as well as new restauranteurs preferring the trucks to sit-in restaurants (Wessel, 2012; Anenberg & Kung, 2015). Food trucks are a cost-effective means for many to be able to enter the hospitality and food-service industry.

Gourmet food trucks have taken North America by storm, their mobility allows for owners to move across the urban landscape and experience different demographics to truly make their products available to a wider cross-section of society of the city's inhabitants. This is not to say, however, that a food truck is better than a brick-and-mortar restaurant in serving customers. The inherent mobility of a truck can lead to competition for vending spaces, tension with sit-in restaurants, and the aforementioned reputation of being unsanitary or bug infested. Across North

America we see various policies in place to prevent owners from falling into these pitfalls and to reduce tensions while stimulating economic development (Koch, 2015; Fouts 2018). Food trucks, as a means of accessing urban entrepreneurialism in the city, are currently understudied in the field of geography. The intersection of urban policy, as well as urban mobility is a unique niche that requires specific scholarly attention that has not been attributed to food trucks as an industry. The particular way in which a food truck can make locational decisions for business on a daily business can offer rich insight into perceptions of urban spaces. Furthermore, there are many misconceptions in food truck policy that can only be dispelled if proper attention is given to the problems. Food trucks face many unfounded regulations that are overwhelmingly bureaucratic, creating a barrier-to-entry for an industry that should be relatively easy to enter. This thesis takes a closer look at the policy and food truck movement in three North American cities, Boston, Massachusetts, USA; Eugene, Oregon, USA; and Vancouver, British Columbia, Canada over the course of a seven-day period in November 2019.

Using a conceptual framework comprised of urban governance, mobility studies, and urban contestation of space, this thesis aims to assess the mobility patterns, if any, of food trucks in relation to policy and social media and how these policies and media prevent or enable these patterns in Eugene, OR., Boston MA., and Vancouver B.C.. This aim is guided by the following research questions:

- 1. To what extent do food truck mobility patterns vary across the sampled cities?
- 2. Does urban policy limit or encourage mobility across the sampled cities?
- 3. To what extent does social media, notably Twitter, play in the localising of food trucks in the sampled cities?

In this thesis I use data obtained from Street Food App over the course of one week in November to map the movement, or lack thereof, of food trucks across these three cities as well as researching policies in these municipalities to understand how they play out in space.

This undergraduate thesis is organized as follows: I first examine the literature that exists on the topic, along with a description of my conceptual framework in Chapter 2, followed by a contextualization of food truck policy in each sampled city in Chapter 3. In Chapter 4 I will outline the methods used for the project as well as the limitations of these methods, with results being discussed in Chapters 5 through 7, each addressing one of the three research questions, and a conclusion of these results finalized in Chapter 8.

CHAPTER 2: CONCEPTUAL FRAMEWORK

This section presents a conceptual framework from which this thesis will draw on, ultimately helping to understand how exactly urban policy plays into the contestation of spaces in the food truck industry. To begin I will discuss the notion of urban governance, notably at the municipal level, and how this plays into the regulation of economic competitiveness and social control. Building on this I will then touch upon 'new urban governance', and its relatively nascent forms of municipal urban regulation. Next, I will address mobility studies, narrowing specifically into urban mobility, to build a conceptual foundation of how people move about their cities and urban landscapes. Further, I will delve into technological mobility, explaining how urban navigation has been eased due to the rapid growth of mobile technology, allowing for city dwellers to find people, shops, and more all while on the go. To bring all of these elements together, I will tie in literature on the food truck industry and discuss recurring themes as well as the existing gaps which I hope to fill. Figure 2.1 illustrates the conceptual framework diagram for this thesis.

Figure 2.1: Conceptual Framework Diagram



2.1 Urban Governance

Government, or at least some type of hierarchical power structure, exists in ways that undoubtedly play out in physical space in all parts of the world. Scholars have argued that the urban context requires more governance than other places due to the nature of economic restructuring and de-industrialization (Raco, 2009). Urban governance has many varying forms and typologies, however an agreed upon definition, according to Bellamy and Palumbo (2016) is "a departure from traditional, state-centered styles of governing" (xiv). Essentially, this means a shift from government to governance, and the changes that liberal democracies have put in place since the end of the 80's (Bellamy & Palumbo, 2016). Moreover, within urban governance, there are varying frameworks, such as good governance, neoliberal governance, interactive governance, networked, or nodal governance among many other types (Gupta, Verrest, & Jaffe, 2015). What is important to note about urban governance, however, are the key tenets of which it is concerned: urban politics, changing modes of democratic representation, citizenship, economic competitiveness, urban sustainability, the 'hollowing out of the state', and social control (Raco, 2009). Furthermore, since the early conceptions of urban governance by scholars such as Logan and Molotch (1987), Harvey (1989), Stone (1989; 1993), Rhodes (1996), and others, urban governance has moved towards 'new urban governance' a means of inclusion and flexibility of power structures (Raco, 2009; Rhodes, 1996). This section will touch upon the elements of economic competitiveness and social control in urban governance as well as new urban governance and how they play out in spaces.

2.1.1 Economic competitiveness

Due to the de-industrialization of urban areas, cities needed to differentiate themselves to attract investment and growth. Urban governance plays a significant role in these processes to be able to stimulate local economies to be an attractive place for investment. One of the ways in which this happens is through what Harvey Molotch (1976) refers to as the urban "growth machine". Working under the guise of land commodification, the "growth machine" boils down to the way in which growth, in terms of population and land, are in the common interest of many diverging parties; It is the responsibility of urban politics to facilitate and environment in which investors will want to coalesce to participate in this growth (Ibid.). The ways in which this can take place is through relaxation of taxes, having favourable labour laws, and many other possibilities as outlined by Molotch (1976). However, the "growth machine" is not without its criticisms. Many critics claim that the "growth machine" is over deterministic and only applicable to the American context (Lauria, 1997; Harding, 1999; Jonas & Wilson, 1999; MacLeod & Goodwin, 1999; Wood, 2004), and Leitner (1990) builds upon this by explaining that the decline of rustbelt city economies created an environment where the "growth machine" only favoured those elites with access to significant amounts of credit therefore, marginalizing many essential members. Moreover, the "growth machine" is synonymous with the growth

coalition movement (Logan & Molotch, 1987), wherein many varying actors, coalesce towards this singular common goal of property (Mossberger, 2009).

These coalition-type agreements are very similar to the concept of urban regime theory. Urban regime theory, as expertly described by Stone (1989), "assumes that the effectiveness of local government depends greatly on the cooperation of nongovernmental actors and on the combination of state capacity with nongovernmental resources" (Stone, 1989, p. 6). That said, regime theory takes a more pluralist approach, compared to the "growth machine's" elitist presupposition (Mossberger, 2009). Furthermore, through regime theory, there is the overall understanding that while politics revolve substantially on capitalist economic activities, there is still some opportunity for the focus to be shifted to social needs in addition to the economic realm (Fainstein & Fainstein, 1983). Finally, urban regime theory emphasizes the social production model of power, which means the collective power all rather than power others (Stone, 1989; Mossberger, 2009). As with any theoretical model, the urban regime theory is not immune to criticism. Some of the main critiques of this theory is the corporate-centred development strategy, neglecting the needs of smaller businesses (Imbroscio, 2004) or, that while not pigeon-holed into the economic focus, urban regime theory attributes too much importance to economics (Bailey, 1999; Reese & Rosenfeld, 2001). Brown (1999) lays claim that there are many other reasons for which a regime should be made beyond those of economic development, for example identity politics.

2.1.2 Social Control

There is a long-standing debate, dating all the way back to Tocqueville's work Democracy in America, on whether citizens are active citizens, or merely subjects dependent on the power of another, many other great scholars like Marx and Foucault have also touched upon the dynamics of unequal power relationships. That said, a large part of governance is the way in which policies attempt to control the populace (Raco, 2009). Many agree that governance inherently attempts to manage societal inequalities, for whom this control favours, however, this is a controversial topic. As we have seen, the urban "growth machine", and potentially even urban regime theory, are not entirely favourable for all, most often advantaging the elites. C. Wright Mills (1956) coined the term "the power elite", meaning that those in high-ranking power positions, be it in politics, economics, or military, have the capability to make decisions whose ramifications affect everyone, not just them or their institutions. Further, the power elite is able

to transform the public, which is free from institutions and able to freely express opinion to a mass (Ibid.). It is within this mass that the public loses autonomy and its ability to question positions of power in a meaningful way (Ibid.). This power is exercised over pupils through what Foucault (1977) refers to as "governmentalities", otherwise known as political reason or rationalities for action, no matter how far-fetched (Rose, 1999; Murdoch, 2006).

Continuing with Foucauldian thought, power, space, knowledge, and practice cannot be separated from one another (Foucault, 1977; Murdoch, 2006). Therefore, power and governmentality are inherently embedded in space. As previously discussed, as the city becomes entrepreneurial and service oriented, it must market itself to attract investment. Often times, this marketing materializes in aesthetic changes to the city, imposing the political agenda on physical spaces (Reeve, 2019). This then strongarms citizens to interact with the city in ways that feed into the ideal investment opportunity. Harvey (1987) outlines that these practices can be exclusionary, by creating an underlying notion of what is proper conduct, indicating who is welcome where. The entrepreneurial city has in turn created an entire industry for hostile architecture and design, which physically deter certain activities and people, such as antihomeless benches for example (Coleman, 2007). Finally, the increasing consumer-centric way in which urban areas are planned force public spaces to become liminal spaces (Zukin, 1991). Zukin (1991) explains that "today, urban places respond to market pressures, with public dreams defined by private development projects and public pleasures restricted to private entry pp. 41)". Ultimately explaining that as we move through public space, we are simply waiting to encounter the next consumer space, wherein we then must oblige by private regulations (MacLeod, 2011).

2.1.3 New Urban Governance

In the advent of challenges posed by the 21st century, such as globalisation and climate change for example, new forms of government have emerged and continue to emerge in the urban governance world. New urban governance is defined as:

the collective and institutionally anchored regulation of urban development processes, from the micro-level of a project area to the whole urban and cityregional levels, by different players such as decisionmakers who are involved in informal and formal, flexible and enduring networks with horizontal as well as hierarchical structures and specific power balances (Hohn & Neuer, 293).

What this represents are the ways in which governance should prioritize participatory procedures, and loosen the antiquated reins of political control, essentially, governments

should not alone be the ones that govern. In more depth, there are calls for governments to not interfere with market systems and business entrepreneurism to the extent that they do. Proponents of New Urban Governance stress the need to transcend traditional governmental power structures and move towards the inclusion of multiple stakeholders in policy development practices (Ibid; Rhodes, 1996; da Cruz, Rode, & McQuarrie, 2019). Harkness and Katz (2016) have deconstructed the notion of new urban governance even further by outlining the key tenets of this governance method. They explain that new urban governance must be democratic and inclusive, long-term and integrated, multi-scale and multileveled, territorial, proficient, and digitally conscious (Ibid).

Given the participatory nature of new urban governance, I will be focusing on the first criteria, inclusion and democracy. We cannot discuss these topics without discussing the work of Iris Marion Young, notably her book with the same title "Inclusion and Democracy" published in 2002. She explains that a democratic decision can only truly be legitimate if all stakeholders have been involved in the process to the extent that they are able to influence the outcome. New urban governance goes one step further in its prediction that governance will be taken over and controlled by the public and their networks to create a post-modern form of governance (Rosenau 1992; Fox & Miller, 1995; Rhodes, 1996). For these networks to be successful, it is important for there to be multi-scale and multi-level participation. (Cruikshank, 1999; Haus, Heinelt & Stewart, 2005; Hohn & Neuer, 2006; Blomgren Bingham, 2006). Meaning that all stakeholders should be involved during every step of the political process in the hopes of removing technocratic, top-down planning which will ultimately forge an empowered network with varying experts (Cruikshank, 1999). Experts, in new urban governance, as explained by Cruikshank (1999) are those who are most personally familiar with the situation in question, for example policies aimed at helping the poor should involve the poor in the decision-making process.

2.2 Mobility Studies

Mobility studies span a wide variety of subjects, such as professional mobility, physical mobility, linguistic mobility, urban mobility, and technological mobility among many others. In his book titled *Mobility* Peter Adey (2017) addresses the various aspects of mobility, both material and philosophical. He explains that without mobility, living a normal life would be

extremely challenging, "we could not get to work or to the nearest source of food, neither could we stay healthy and fit [...] nor could we escape the perils of civil war, or the threat of ethnic, racial and religious persecution" (p. 2). Mobility, therefore, is embedded within and primordial to everyday experiences. Furthermore, mobility is often associated with urban space, for example the fast pace of New York City or Tokyo. We cannot view societies or cultures without mobility (Urry, 2000a, 2000b, 2007; Kaufmann, 2003). Kaufmann (2003) goes one step further in explaining that we must "get rid of the very concept of society in order to replace it with an approach based on movement" (p. 18). Furthermore, mobility cannot be discussed without the mention of connectivity and networks. Urban sociologist Manuel Castells (1996, 1997, 1998) has created a successful collection of literature studying how societies are connected through movement and flows rather than places. For the purpose of this thesis, I will focus on both urban and technological mobility to be able to cover the way in which food trucks can physically move about urban spaces as well as their ability to access the city and its citizens through the mobility of information online.

2.2.1 Urban Mobility

There are a handful of ways in which a city-dweller can move throughout their urban space, this can be on foot, by bike, on public transit, by car, et cetera. All of these involve some form or other of a street (von Schönfeld & Bertolini, 2017). Streets however, according to Schönfeld & Bertolini (2017), are and should increasingly become public places of interaction, which require a different approach to street planning. Unfortunately, often times, modes of mobility are explicitly separated in the name of safety (Agyeman & Zavetovski, 2015; Dinh, 2011). Jane Jacobs (1961), is a great proponent of the street, namely sidewalks and their importance in urban life and mobility. Her vivid description of sidewalks as an "intricate ballet in which individual dancers and ensembles all have distinctive parts which miraculously reinforce each other and compose and orderly whole" (p. 50) demonstrates the need for sidewalks to be multi-use spaces of public interaction and mobility rather than separation. Further, experience a space, we must understand the emotional side of design (Norman, 2004; Coxon, Napper & Richardson, 2019). Thus, city streets are not just spaces of movement, but also places of interaction and economic activity and should be designed as such (Mehta, 2009).

Designing for interaction and public spaces allows for urbanites to attach sentiments to urban areas and create a mental map which help them to navigate. Kevin Lynch's *Image of the City* (1960), is a pivotal work that describes the way space can be tyrannous and disorienting, and therefore while an urbanite should be able to read what the city is telling it, they should also be able to impart their own stories on the landscape. Lynch describes the city as being made up of "districts [which] are structured with nodes, defined by edges, penetrated by paths, and sprinkled with landmarks" (Lynch, 1960, p. 49) which allow the city to be read. Mental maps are created by evaluating the Lynchian principles outlined above and by combining our perceptions of what we see and feel (De Jesus, 1994). Therefore, using the spatial and visual information at our disposal as we navigate the city, we create a mental structure that then guides us to imagine what the spaces we cannot see might resemble (Ibid.). We cannot discuss Lynch without discussing the criticisms the original study faced, being called too simplistic and biased, however the study has now been successfully replicated in many places all over the world due to the method's accessibility (Lynch, 1984).

2.2.2. Technological Mobility

In recent years, mobility has increasingly been understood as technological mobility, notably with the advent mobile phones. This access to mobile technology has changed the ways in which the city is navigated, and decisions are made (Karimi, 2011, Gerald Collins et al, 2017, Aguiléra, 2019). Aside from the city, a consumer's constant access to technology plays a large role in other sectors, such as business practices and marketing, social relationships, information flows, among others (Prasad & Ruggieri, 2003). In some cases, technological mobility has begun to replace physical mobility. In her chapter, *Smartphone and Individual Travel Behavior*, Anne Aguiléra (2019) explains that more and more people opt to work from home, do their shopping online, and travel less due to the availability of video chat. Furthermore, technological mobility, such as easier access to work e-mail, for example, has created a fragmentation of activities that were once strictly professional or personal, answering a work e-mail before bed is no longer out of the norm (Lenz & Nobis, 2007; Middleton, 2008; Couclelis, 2009; Ben-Elia et al., 2014; Aguiléra, 2019).

Access to information also allows for citizens to be constantly aware of what is going on in others' daily lives (Hinton & Hjorth, 2013). Jenkins (2006) explains that social media encourages users to participate in the production of media, something Bruns (2005) refers to as

"produsers", leading to the creation of microblogging mediums such as Twitter. These microblogging mediums allow for users to connect with others they would not have originally spoken too by using elements like metadata, in the case of Twitter, hashtags (Zappavinga, 2012). Hashtags allow for multiple posts to be aggregated under a single term, facilitating content searching and the creation of connections or affiliations (Ibid). Widely used hashtags then gain a spotlight as a "trend", these trends then encourage users to look deeper into what they may be about, be it a business, a movement, or a location which they may not have come across otherwise (van Djick, 2013).

2.3 Conclusion

Both of these bodies of literature encompass the general concept of food trucks which will help steer this analysis. Food trucks are inherently mobile, assumed to rely on technological mobility, all the while jumping through the hoops of urban governance in cities that seek to make themselves desirable. Literature on food trucks themselves most often focuses on their sanitary practices (Cardoso, Companion & Marras, 2014; Sonenshein, Nault, & Obodaru, 2017; Okumus et al., 2019, De Lima et al., 2019), the governmentality and policy food trucks encounter (Cardoso, Companion & Marras, 2014; Koch 2015; Ehrenfeucht, 2017, Freybote, Fang & Gebhardt, 2017) as well as technology and social media (Caldwell, 2019; Wessel, 2012; Siu, 2013; Anenberg & Kung, 2015; Wessel, Ziemkiewicz & Sauda, 2016). Very little scholarship exists on the spatial element of food truck locations. Lastly, the literature on Western food trucks is relatively nascent with street vending in the Global South occupying a large portion of the scholarship (Tinker, 1997; Turner & Oswin, 2015; Anjaria, 2016; Abrahale et al. 2019). Using this thesis, I will fill gaps in the literature by connecting the political and technological aspects of food trucks to a spatial analysis of the data in order to identify patterns that empower or inhibit food trucks operators.

CHAPTER 3: CONTEXT

Food trucks have experienced a large boom in the realm of food service, and as a result have created a unique industry that is separate from that of a brick-and-mortar restaurant. The mobility of food trucks allows for exploration of the urban landscape and for the deliberate targeted access to different markets or demographics throughout the city. To be able to properly understand the results of this thesis, this chapter will give a brief overview of each city of study and its food truck ecosystem. Moreover, given the variety of policy that exists from municipality to municipality, it is necessary to go one step further and contextualize the urban governance of food trucks in each of these geographic areas of study.

3.1 Boston, Massachusetts, USA

Boston is a city on the east coast of the United States known for its rich history and many college campuses. In 2011, the city of Boston released an ordinance promoting the economic development of the food truck industry as part of its Small Business Development office, which would be the beginning of a thriving hospitality niche for the city (City of Boston, 2019a.). The eight-page ordinance outlines the general policy and regulations for the food truck industry. The city created a commission to oversee the permitting and application process. The Mobile Food Trucks Committee is made up of the Public Works Department, the Transportation Department, the Inspectional Services Department, the Police Department, the Fire Department, the Director of Food Initiatives and the Assessing Department (Ibid). To apply for a food truck permit, an owner must provide a Hawker and Peddler License per employee handling money on the truck, a Business Certificate, a Certificate of Liability Insurance (up to \$1,000,000), health and open cooking and burning permits, a business plan, a GPS unit leased from Trimble with a Sprint mobile plan, as well as a written agreement from their commissary, such as a community or restaurant kitchen (City of Boston, 2019b). Should the owner wish to operate on private property, they must also submit either a lease or a letter from the landlord of the property, a Use of Premise(s) permit, as well as a site plan. Once these documents have been procured, the owner can fill out and mail the application and application fee of \$500 to the Office of Small Business to be reviewed by the Committee.

For permitting purposes, vending on public property in Boston is divided into three separate zones. Zone 1 sites, as per the City of Boston website are "high-traffic locations, very competitive, and require a higher fee" (City of Boston, 2016). Examples of Zone 1 sites would

be City Hall Plaza, the Boston Public Library, or Claredon Street. Zone 1 sites are distributed by lottery on a yearly basis, with no guarantee of renewal for the following year. Zone 1 sites can cost anywhere from \$125 to \$1225 per month, depending on the number of "shifts" a vendor has. Shifts are essentially number of times a truck appears on that curb throughout the week, which are predetermined on the permit. Every quarter, owners have the opportunity to forgo or renew a shift, which is then entered into a mini-lottery for other Zone 1 permit-holders (Ibid). Zones 2 and 3, according to the city website, "are in the heart of Boston's vibrant neighborhoods, frequented by local residents and students, and have a three-year site permit" (Ibid.), these sites are distributed on a first-come-first-served basis. These sites are in areas such as Chinatown (Zone 2), Dudley Square (Zone 3), and Peter's Park (Zone 3), it is unclear exactly what differentiates Zones 2 and 3. Newly added locations are added to Zone 2 for their first year and then reassessed and redistributed to the appropriate zone if need be. The cost of a Zone 2 permit ranges from \$75 to \$900, whereas Zone 3 ranges from \$50 to \$600.

In addition to regulating where exactly the food trucks are allowed to locate, the trucks are also mandated to operate within very specific time frames, with each time frame being a new "shift", meaning there are 21 shifts available at one location per week. In Boston these time frames are breakfast between 7am and 11am, lunch between 11am and 3pm, and dinner from 3am to 8pm (Ibid.). There are a handful of other locations in the Boston area for which special permissions are allowed from outside of the Committee, these locations are the Greenway, Terminal locations under the jurisdiction of the Mass Bay Transit Authority (MBTA), the Boston Public Garden, as well as the SoWa Open Market. Once approved for a permit, the owners must advise all buildings within a 100 feet radius of the truck that they will be doing business, as well as perform community outreach to advise locals of their activities, if there are no complaints within 10 days of these warnings, the permit is then valid for use. All trucks are tracked according to their permit schedules on the city website by their mandated GPS devices. It is unclear however, what the consequences are for violating the conditions of the permits on the city website itself.

The policy landscape for food trucks in Boston is confusing and overwhelming. Little information is available about costs of all the required permits and documents, as well as the enforcement of the regulations and penalties that could result. The Harvard Food Law and Policy Clinic developed a legal toolkit guide in collaboration with the Boston Mayor's Office for Food

Initiatives to demystify the process for those wishing to start a food truck business in Boston, however it still leaves many questions unanswered for operations once a permit is obtained. Additionally, Boston's unique urban governance, with its varied municipalities forces food trucks to have to apply for permits in each municipality, even if they are attending private, single-day events. Due to this, in a 2018 study by the U.S. Chamber of Commerce Foundation, Boston was found to be the most challenging city for food trucks in the USA, out of the 20 cities sampled, Boston placed last for ease of permit acquisition and regulatory costs of operations (Hendrix and Bowdish, 2018).

3.2 Eugene, Oregon, USA

Eugene is a smaller city in Lane County, Oregon with a population of around 116,000. Its quaint small-town feel paired with a vibrant foodie culture created fertile ground for the food truck industry. Growing from this, Eugene is now home to almost 40 food trucks (Russo, 2016). Food trucks, more commonly referred to in Eugene as food carts, have a handful of legal pathways when it comes to licensing. If cart owners wish to locate downtown, they must apply to Saturday Market, Inc. a non-profit market operating downtown Eugene, who is also contracted with issuing activity permits for the city's Market and Downtown Activity Zone (Saturday Market, Inc., n.d.). This is a unique process that differs from Boston in the sense that this licensing is done by a private firm rather than a municipal office. Saturday Market's application process is lengthy and extremely bureaucratic. The application itself takes the shape of a legal agreement that is chock-full of legal jargon. On the other hand, Saturday Market, Inc.'s Food Cart Packet is complete with every step of the process with a checklist that clearly states what is required and when.

The first step in Saturday Market, Inc.'s application is to submit a Food Cart Vending Initial Intake, essentially a document indicating to the organization that a complete application is being compiled. A complete application is comprised of a signed and notarized Proposal for Food Cart Permit, a signed insurance permit for a value of \$500,000, a detailed menu, scaled drawings of the vending unit, equipment, signs, service operations, and the customer areas. An applicant must also include health permits required by the health department, Food Handler's Cards for each employee, a signed Commissary Agreement if a commissary is being used, a signed Food Cart Contract and all required payments must be included (Ibid.). The application has a fee of \$195, the Saturday Market also charges rent for use of the downtown spaces for

which applicants must include first and last month's rent, the final payment to include is the renewal fee if the owner is renewing an existing permit. Saturday Market accepts applications on the basis that they conform to requirements, the owner's prior dealings with public works, their experience and reputation for satisfying expectations and the expected diversity that the vendor will bring to the Downtown area.

Once the permit has been acquired, Saturday Market imposes tight restrictions on the carts. Saturday Market enforces an operation quota on its carts, requiring they operate for at least five hours a day, five hours a week during the summertime, and three hours a day for five hours a week in the off season. Food carts must also be open for business before 11am and stay until at least after 2pm unless they possess a night cart license, they must also operate for at least 20 days of each month unless otherwise permitted. Additionally, carts must operate within the location that is ascribed to them by Saturday Market (Ibid.). There are also restrictions imposed on what food carts are able to sell, which is the main reason applicants are required to submit a copy of their menu. The rationale for this is for the vendors to offer a wide range of products and to avoid unnecessary competition amongst vendors in the Downtown core (Ibid.).

Permitting processes for other regions of the city are not openly published, those wishing to locate on 13th avenue near the University of Oregon must contact the Eugene Chamber of Commerce for more details on the application and permitting process (City of Eugene, n.d.). Furthermore, at the moment the city of Eugene does not allow for food cars in city parks unless there is a pre-approved event taking place in the park, wherein the authorization of the event organizer has been extended. Health permits and food handling permits are still required in these instances. If a vendor seeks to operate on private property, the operator must ensure that they are in the proper zoning area. Once confirmed the zoning allows for food vending, the owner must obtain approval from the property owner, possess the appropriate health and food handling permits. Moreover, food carts cannot use parking spaces required by other business at the location, block vehicle or pedestrian access, as well as drive-thru service is prohibited (City of Eugene, n.d.).

Less information is available online regarding food cart licensing and permitting in Eugene in comparison to Boston. This could be largely attributed to the smaller size of the city, it seems that regardless of the open availability, obtaining a permit to operate in the Eugene is relatively simple, additionally, the small town does offer unique amenities, with Saturday Market

allowing trucks to remain on the street overnight. That said, trucks are most often operating in "pods" in private parking lots (Griffin, 2019), a term often used in Portland due to their unique food truck regulations, perhaps alluding to the ease of operating on private property in comparison to the Downtown areas, whether this is true or not will be evaluating in the results section.

3.3 Vancouver, British Columbia, Canada

Moving north the largest city in western Canada, Vancouver, one of the most dense and diverse cities in Canada, was one of the first cities in the country to pick up on the food truck trend and now has 92 vendors in the downtown (Lee, 2019). All street activities in the city of Vancouver are the responsibility of the city's Engineering Department. The department extends two types of permits a truck can opt for, it is important to note that these permits are not mutually exclusive. The first of the two permits is the Stationary Food Vending Permit. The application process for this permit is only published on the city website if a spot is available, the application requires: a valid City of Vancouver business license, liability insurance up to \$2,000,000, a valid health permit, a vendor agreement document, a Food Safety Plan, schematic drawings and documentation on the vending unit, commissary documentation, a menu plan, a nutritional writeup, a detailed list of suppliers and producers, why the business is unique to downtown as well as the permit deposit fee payment (City of Vancouver, n.d.(a)). Additionally, all applicants, regardless of type of permit, must have a Waste Management Plan that mandates they separate their waste into recyclables, organic compostable, and general garbage, as well as show a demonstrated commitment to sustainability by minimising their use of single use plastics (Ibid.). The Stationary permit allows for vendors to locate on a specific corner of the downtown core west of Main street and south of False Creek. Under this permit, vendors are not permitted to move unless they have received permission from the department under special circumstances, for example construction (Ibid.). Should a truck not comply with the city's guidelines, operators can have their goods confiscated or their permit revoked. A permit of this type has an application fee of \$54.12 in addition to the cost of the permit itself, which has a price tag of \$1265.68 (Ibid.). Permits are distributed based on a scoring system, wherein top-scoring applicants are successful, only 100 permits of this type are distributed, with no guarantee of availability from year to year (Lee, 2019). The scoresheet in question does not seem to be available to the public.

Vendors that do not wish to be restricted to a specific corner or to the scoring-system can opt instead for a Roaming Food Vending Permit. This permit has a fee ranging from \$170.16 to \$339.03 depending on if the vending unit has a motor or not (City of Vancouver, n.d.(b)). To apply for the Roaming Vending Permit, owners must submit a completed details form, a health permit, a valid business license, liability and motor vehicle insurance, a criminal record search, a waste management plan, and the aforementioned permit fees (Ibid.). Although this permit allows for mobility, it does have a longer list of restrictions. The permit does not allow vending in the downtown area that Stationary permit holders have access to, nor does it allow vending in a one black radius from grade schools between the hours of 8am and 5pm on school days, or in park boundaries, beaches, school grounds, private parks or within 100m of a park concession stand. Additionally, Terminal Avenue between Thornton and Station Street have a two-truck maximum, and Railway Street has a three-truck maximum, finally, vending at the Olympic Village at 1600 Manitoba Street is only permitted on the east side parking lot (Ibid.). Furthermore, vendors must remain 100m from restaurants that sell a similar product or have a similar concept or theme to theirs. Once an operator arrives at their desired location, the truck must be in operation with one hour of its arrival, should the truck be unfrequented by customers within the first hour of its opening time, the truck is mandated to move to a new location (Ibid). Similar to that of the Stationary Permit, should the vendors not cooperate with any regulation, the City reserves the right to confiscate goods or the vendor's permit.

Compared to the previous two cities, the food truck policy in Vancouver seems more relaxed. There are no limits of the number of Roaming Permits to be distributed, there are no quotas for operating hours, and those geographically constricted trucks with Stationary Permits are able to also secure a Roaming Permit. That said, the selection process for the coveted Stationary Permits is ambiguous, leading the applicant to be unsure of why their application may have been denied.

CHAPTER 4: METHODOLOGY

This next section will focus on the overall methods of this research project. To begin, I will describe and justify my sample choices of Boston, Eugene, and Vancouver, this will then tie in with the description of my data collection methods. Next, I will describe the mapping process I chose and further justify decisions made regarding the visual nature of the thesis. I will dive deeper into the specific variables chosen and statistical analyses that I carried out in order to properly answer my research questions. I will then conclude by critically discussing limitations of this research as well as the challenges faced along the way that ultimately shaped this thesis.

4.1. Sampling and Data Collection Methods

4.1.1. Sample Selection

To begin, the study locations for this project were the three cities of Boston, Massachusetts; Eugene, Oregon; and Vancouver, British Columbia. There are a variety of reasons why these cities were chosen. Firstly, cities with a longer food truck season were ideal for this study due to the timing, since observations, which will be discussed later, were conducted in early November. Further, these three cities, out of all others on Street Food App had the most activity. Moreover, these three areas offered a wide spectrum of contexts. Within the sample there are both American and Canadian contexts, a dichotomy between the east coast and the west coast, as well as a variation of populations, with metro Boston at roughly 4.6 million, Eugene coming in at around 169,000, and the greater Vancouver area with nearing 2.4 million people. Finally, each sample city is home to a handful of universities, wherein students seek quick and easy food that is conducive to essence of the food truck industry.

4.1.2. Data Collection

Locational data for this project was collected using Street Food App, an app and website that reliably tracks self-submitted locations of food trucks across the globe on a daily basis. Comparable to highly popular Roaming Hunger, Street Food App was chosen because its user interface was more conducive to the project. Street Food App employs both a map as well as a list of locations, whereas Roaming Hunger only uses a map, making it difficult to ensure I have noted all the observations, especially in food truck dense areas. Throughout the week of November 4th-November 10th, 2019 inclusively, every location tracked in Boston, Vancouver, and Eugene "menus" was noted in a comma separated value sheet. The nuance of the "menu" is important here, since in some instances, when clicking on Vancouver for example, locations

were in fact in Surrey or Richmond, B.C.. The exact details noted in the data sheet were date, name of the truck, the location, and the reported service times. Once this step was completed, latitude and longitude coordinates were added to the sheet in order to ease the mapping process. Coordinates were obtained by inputting the location into Google Maps and using the coordinates that were returned. Next, using both Google searches and Street Food App's built-in social media links, I attempted to visit each truck's Twitter account. Tweets taking place within the observation period were noted word-for-word in a separate sheet. In the event an emoji was used in the tweet, I chose to remove them as they are not database friendly. Had the emoji been imperative to the overall message of the tweet, it was described in text, the same process was applied to images. Once these tweets had been collected, I returned to the original data sheet and marked whether or not the location had been tweeted using a simple binary code. Any locations that were tweeted but not posted on the Street Food App were added, again using a binary code to demonstrate which locations were promoted on Street Food App versus Twitter.

4.2. Mapping

4.2.1. Generalized Methods

For the mapping portion of the project, the latitudes and longitudes were added to QGIS as points on the graphs. Additionally, each location that was repeated in the week by the same truck was counted and added as a histogram on the map. This created a significant amount of visual clutter, to minimize this, the map was rendered in three dimensions, with the histograms protruding from the maps surface. Another one of the ways in which I chose to minimize visual clutter was to separate the overlapping locations of varying trucks by small fractions of points of the coordinates. In other words, if two separate trucks occupied the same location, even though it may be on separate days, the points were slightly separated. Next, each truck was attributed a different colour in order to be able to differentiate their movement patterns. The final step I took that was standardized across the three cities was using a divide by attribute function in order to create new data sets according to my analysis variables and map them individually.

4.2.2. City Specific Methods

In this next section, I will very briefly describe the specific mapping that took place in each of the cities given their political context. Boston was the city wherein I had to stray from the generalized method the least. In this city, I chose to add a shapefile of the Boston city boundary retrieved from Analyze Boston at data.boston.gov. I chose to do so since many of the

locations I had recorded were around Harvard campus, which is in fact in Cambridge. The city boundaries are important to be able to accurately understand where the studied policies begin and where they end. If it so happens that the majority of my sample occurs outside of the Boston boundary, it is imperative that I observe the policies in these areas as they may play a factor in why these trucks choose to locate outside of Boston proper. Finally, the small number of locations that are not under the jurisdiction of Boston, such as the Greenway, as discussed in the previous chapter are highlighted in blue.

For Eugene, due to the lack of density and clear divide between one city and the next, city boundaries were not a priority. Further, it appears that many of Eugene's policies are at the regional level, and therefore spillover into bordering towns. Two elements I chose to include however, were parks and the Downtown Activity Zone. The shapefile for the parks was retrieved from the City of Eugene Mapping Hub. These parks are on the map in red with hash marks throughout. I chose to include parks due to the policies present in Eugene prohibit trucks from operating in parks unless they are part of a private event that has permits for the space as a whole. Moreover, the inclusion of the Downtown Activity Zone proved important in this project. Given that this specific area is governed by a party separate from the local government, outlining the area will aid in visualising the popularity of the space. Unfortunately, there were no shapefiles available online for this specific area. Using the boundaries I could find on Sunday Market's website, I was able to create by own shapefile to demarcate the area. This 30-block area can be seen in the blue square from Lincoln St to High St between West 6th and West 11th Avenues.

Vancouver was the case that required the most additions. Firstly, the large city boundary and concentration of trucks in the general downtown areas nullified the need for city boundaries. Similarly to Eugene, Vancouver also prohibits food trucks in parks unless part of a private event, therefore parks are denoted in the same way, using red squares with hash marks. Next, Vancouver has many unique policies that I felt should be represented on the map itself to be able to aid in visual analysis. Firstly, a small section of Terminal Avenue between Thornton and Station Streets has a two-truck maximum at any time, as well as Railway Street that has a threetruck maximum, these streets are highlighted in red. Additionally, the city opts for the aforementioned two types of permits, the Roaming and the Stationary. The trucks that find themselves with a specific boundary of downtown, as demarcated by the blue shaded area, are

represented by cube-shapes as opposed to cylinders for those with Roaming permits. This allows to visually observe if a Stationary permit holder also possesses a Roaming permit or is potentially breaking permit rules.

4.3. Analysis Methods

Within those maps and data sets, basic statistical analyses were carried out. I first began by simply calculating the average number of separate locations both per truck, as well as per city. Moreover, the average amount of days spent in each location was calculated. Next, using a simple heatmap analysis on the mapping software, in addition the use of PivotTables in Excel, the most popular locations were determined. From this point, individual maps were created for each sampled city for:

- 1. Location posted on Street Food App
- 2. Location not posted on Street Food App
- 3. Location posted on Twitter
- 4. Location not posted on Twitter
- 5. Weekday Location
- 6. Weekend Location

After this, sums were established for each of these above criteria in each city, and averages were taken across the cities. The choice to look at weekend versus weekday rather than every single day was due to only having one weeks' worth of data, it would be difficult to establish any kind of trend. Therefore, the use of multiple days in a clearly divisible pattern was chosen. Furthermore, given that the number of points in the weekday will undoubtedly surpass those of the weekend due to differences in number of days, averages were taken of these to normalize the data.

4.4. Limitations and Challenges

I would not feel comfortable submitting a thesis in which I claimed all methods and data collection processes to be entirely without fault. It is imperative that I be transparent about the limitations and challenges I have faced so that future studies of this nature can learn from these 'speed bumps'.

4.4.1. Methodological Limitations

This project has faced many challenges and limitations. To begin, the largest limitation is the timing of the observations. It is unquestionable that early November is late in the North

American food truck season in which the winter months pose a significant challenge to operations. A more appropriate and fruitful observation period would have been in peak season, from July-August. Further, the length of the observation period could have been increased significantly to offer more insight. One week is not enough time to determine a significant trend that takes place. It is possible that every Monday there is a specific prime location for food trucks, or that weekends you often find trucks in parks for private events. Unfortunately, due to delays in getting the project started that ultimately led into time constraints, this was not possible. Next, the methodology of this thesis is very case based, therefore, reproducibility is difficult. The aforementioned analyses that vary from city to city in conjunction to the geographic and political differences across them make choosing an empirical methodology difficult, if not impossible.

4.4.2. False Starts

In this section I will discuss the many transformation this thesis has undergone and the challenges that caused them. I hope that by doing this, future studies that I would have liked to take on can blossom. The original proposal for this study was to understand, from the point of view of a food truck owner, the ideal location for a food truck. I had hoped to do this by meeting with food truck owners in Toronto, Ontario and performing semi-structured interviews, I had also hoped to ask them to partake in a participatory mapping process in which they would outline their daily routes for one to two weeks. From this I would have hoped to understand what is important in locational decision-making for a food truck. Unfortunately, I had received very few interested participants, leading to a highly insignificant sample size. By the time I had come to face this, the food truck season was nearing its end, and my academic schedule required me to be physically present in Montreal.

While Montreal does have food trucks, the policy places enormous limitations on their movement, often limiting them to one single corner for the entire season in addition to private events, therefore this study would not be viable. Given that the season had been nearing its end and the low response rate of my prospective participants as well as the need to move the project along, I had decided interviews, or interactions of any kind with food truck operators, was probably no longer an option. From this, I decided to focus particularly on my research question surrounding social media. I looked to Twitter to try and gather tweets from food trucks, to then look for popular locations among these, to hopefully be able to find commonalties across these

popular spaces using platforms like Google Street Walk, although this in itself is not without limitations. Given that I would not need to physically interact with anyone, I could choose anywhere in the world for my project. Some research indicated that Chicago, Illinois had a lively food truck scene with fairly liberal policies. Due to the large number of Tweets I would need to find and transcribe, it seemed that data scraping would be the most efficient way to do this. Using ParseHub, I had scraped hundreds of tweets from a little under 100 hundred trucks, at the time, this seemed extremely promising. After cleaning the data, I quickly realized that many of the tweets dated as far back as 2014, and very sporadic from there. Understanding what made locations appealing over this amount of time would be extremely difficult due to changes that take place in urban areas such as construction, new businesses and offices, or others. It was from this point where I established the need for real-time and recent data, and it seemed that Twitter would not be the place for this, which is an interesting finding that I will return to in the following chapters in the context of my sample.

CHAPTER 5: MOBILITY PATTERNS

This chapter will focus on answering my first research question: *To what extent do food truck mobility patterns vary across the sampled cities?* I will begin by looking at each city individually, taking into account both statistics and the maps created. I will seek to make conclusions for each individual city and then broaden into a wider, generalizable result.

5.1. Results and Analysis

5.1.1 Boston

The Boston category on Street Food App recorded a total of 16 trucks and 91 locations. After looking at Twitter, six locations were tweeted but were not reported on the Street Food App. Of these 97 total location reports, there were 41 unique locations. This means an average of 13.85 different locations per day, as well as 6.06 average locations per truck per week, or less than one location per day per truck, indicating that not all trucks are out every single day. In terms of weekend and weekday comparisons, there were 82 weekday locations and 15 weekend locations, normalised, this equates to a ratio of 16.4 weekday locations to 7.5 weekend locations. Of all the days of the week Wednesday appeared to be the most popular, with a total of 20 reports, followed by Tuesday with 18. The rest of the daily sums can be seen in Figure 5.1. **Figure 5.1:** Distribution of truck locations per day of the week in Boston, MA.



When observing the maps, we can see that there are a handful of locations that are quite far from the city boundary, however they are still in the Boston Metropolitan area. Interestingly enough, these locations are only frequented during the weekdays (Map 5.1). Further, even though there are no classes on the weekend, there are still trucks that locate at Harvard campus on the weekends (Map 5.2). Overall, however, there does not appear to be a distinct pattern when comparing weekend locations versus weekdays. Next, given the small number of locations that are not present on the Street Food App, it is difficult to say that there is an exact pattern here, especially when one location is the western-most point compared to the others that are spread throughout Boston city limits.



Map 5.1: Weekday locations in Boston, MA.



Map 5.2: Weekend locations in Boston, MA.

In terms of Tweets, although Boston is the most active on Twitter of the three cities, there also does not seem to be a clear pattern between which locations are more likely to be tweeted and which are not. This will be further discussed in Chapter 7. The most popular location appears to be the Harvard University Science Center, with trucks locating there multiple days of the week, and one truck being there every day of the observation period. Moreover, the Greenway is also a very popular area, with 10 individual trucks locating on its premises. Copley Square and Northeastern University also appear to be hot spots for this particular observation period. Finally, when it comes to specific trucks and frequency of locations, there is one truck that consistently ventures further away from the city's core, *Chicken and Rice Guys*. The key factor of this may be due to the large number of trucks *Chicken and Rice Guys* own, which allows them to expand their network while still accessing the downtown areas.

5.1.2. Eugene

In the case of Eugene, there were a total of 117 reported locations by 23 different food trucks with 32 unique locations. Over the course of the weekdays, 93 locations were reported and 24 were posted for the weekend schedule. This equates to an average of 18.6 weekday locations

to 12 on the weekend. For the entirety of the week, there was an average of 16.7 trucks per day and 5.09 locations per truck. Similarly to Boston, this indicates that not all trucks operate every single day. Wednesday exhibited the most food truck activity with 22 active trucks, followed by Thursday with 21 as displayed in Figure 5.2.



Figure 5.2: Distribution of truck locations per day of the week in Eugene, OR.

In the visual analysis of Eugene's food truck landscape, we can see visually that there is quite a bit of movement, with only two trucks keeping the same positioning all seven days. Popular hotspots in the city are the intersection of Van Buren Street and Blair Boulevard as well as Country Club Road. Contrary to Boston, the universities do not appear to be a popular place for food trucks, with only one visit throughout the observation period. Next, when comparing the weekdays to the weekend, we can see a clear trend (see Maps 5.3 and 5.4). While no new locations are introduced, their overall area becomes more concentrated, locations outside of Eugene's downtown hub no longer appear active on the weekends.



Map 5.3: Weekday locations in Eugene, OR.



Map 5.4: Weekend locations in Eugene, OR.

5.1.3. Vancouver

Vancouver had the most food truck activity across the three cities with a total of 59 unique locations and 137 total reports from 35 different trucks. In terms of day-based statistics, 128 reports took place during the week and only nine on the weekend. Meaning 25.6 trucks operate on an average weekday and 4.5 on an average Saturday or Sunday. There is a mean of 19.57 locations per day and a relatively low average of 3.91 locations per truck. The most popular days of the week are Wednesday and Thursday coming in at 28 reports compared to Sunday where there are only three active trucks (Figure 5.3). The majority of the weekend trucks locate in the stationary permit zone, also known as Vancouver's downtown, with two stationed in the roaming zones. Next, we can see cases of trucks that should have Stationary permits outside of their zone (Map 5.5), indicating they are either disregarding these guidelines or have purchased a second Roaming permit, demonstrating their desire for mobility. Finally, hotspots include Great Northern Way, Terminal Avenue, Railway Avenue and LaSalle College on Renfrew Street.



Figure 5.3: Distribution of truck locations per day of the week in Vancouver, BC.



Map 5.5: Stationary trucks outside of the downtown zone in Vancouver, BC.

5.2 Discussion

We have been able to observe that movement is desirable across all cities, especially in Vancouver where food truck operators go through the lengths of obtaining a second permit to be able to be mobile. That said, after a quick statistical and visual analysis, it is evident that in reality, there is less movement than anticipated. Observing Figure 5.4, we can see that the majority of trucks in all cities over the course of the week only visit one unique location. Whether that location is visited once, or seven times, is irrelevant to this question. What this reveals is that there is an overwhelming lack of mobility across the cities. This is also true in every city individually, in other words there is not one city alone that is skewing these numbers. Further, the outlier in this situation is *Chicken and Rice Guys* in Boston, which owns a multitude of trucks however they do not identify which truck is where, allowing their statistics to surpass the upper bound of what is reasonable.





Next, when observing the spatial patterns themselves, there are quite a few interesting things to note. When looking at map hot spots, Boston's universities are extremely popular and LaSalle College in Vancouver as well as Emily Carr University can also be considered frequently visited. This further reinforces the idea that students respond well to food trucks. In the case of Eugene universities are avoided, why they are avoided has much more to do with policy than location or demographics and therefore will be discussed in more detail in Chapter 6. Moving to the weekday versus weekend comparisons, interestingly enough, every city tends to narrow into the downtown portions of their cities on the weekend. This trend is most evident in Eugene; however, I posit this is the case due to Eugene's small size, and the possibility that the downtown core is made up of shops and markets rather than the traditional high-rise office building seen in Vancouver and Boston. What this means is citizens enter downtown more often on the weekends to treat themselves or run errands than they would on the weekday. In the case of Boston, it is difficult to make this conclusion given that it is mostly only Chicken and Rice Guys that are located further away from the downtown core on weekdays and not weekends, that said, we could say that for this truck specifically, there is a clear trend, but I am not comfortable making that claim for the town as a whole. When it comes to Vancouver, both of the weekend instances located in the Roaming permit zones are in farmers markets, given the private nature of farmers markets these have a unique licensing process separate from that of a typical curbside service, this will be discussed further in Chapter 6. However, I hypothesize that the farmers

markets may be an added incentive to operate on the weekends similarly to the case of Eugene in that there is a guarantee that potential customers will be in attendance, otherwise, unless parked in the downtown shopping district, it may simply not be worth it to open on the weekends in Vancouver.

5.3 Conclusion

Overall, there is not one single pattern that can be determined as a blanket pattern across the cities. This is as I expected. Given the varying geographies and urban landscapes, similar patterns are simply not possible. Contrary to my expectations, what I have discovered is that mobility does not happen frequently. More often than not there are trucks occupying only one to two locations per week. This mobility can be inhibited by many things, such as power and water supplies, having an established customer base that is tied to one location, policy (which will be discussed in the next chapter), among many other reasons.

CHAPTER 6: POLICY AND MOBILITY

An inherent portion of this project has been the political element of the food truck industry across the sample cities. This chapter aims to address my second research question, which is: *Does urban policy limit or encourage mobility across the sampled cities?* I will begin by sharing my results and analysis of my research and then discuss these within a macro lens wherein I will attempt to draw sound conclusions regarding these policies. I will also take a prescriptive approach and recommended changes that I believe, in conjunction with the literature, should be made to soften the guidelines in these cities in order to make food truck ownership more accessible.

6.1 Results and Analysis

6.1.1. Boston

The policy in Boston in relation to the observed locations is ambiguous, it is uncertain on whether the policy applies to the Boston metropolitan area or just the City of Boston itself. As we can see in Map 6.1, a multitude of locations are actually outside of the city's boundaries, therefore, it is difficult to know whether they are subject to the same guidelines.



Map 6.1: All locations in Boston, MA categorized by truck.

What is most interesting regarding the policy in Boston and the locations recorded and mapped is that the Greenway appears to be an incredibly popular location. As discussed in the Context chapter, the Greenway's permitting processes are not managed by the City of Boston but rather by the Greenway Conservancy, as well as the markets within the Greenway having their own vendor regulations. It is possible then, that the Greenway may have a more accessible and easy-to-navigate licensing process that is more appealing than the rest of the city. On the other hand, another explanation for the Greenways popularity among food trucks may be its popularity among tourists. Lastly, what is unique about Boston policy is that of the three sampled cities, Boston is the only one that allows food vending in public parks, and ironically, parks happen to be two out of the three most popular locations.

6.1.2. Eugene

For the policy in Eugene, the most obvious result would be the lack of popularity of Saturday Market's Downtown Activity Zone, only hosting three trucks. I posit three reasons for this. One, the area is quite small and may have too much competition, two, Saturday Market simply may not issue more than three permits, or, three, it is possible that Saturday Market's process is lacking in added value when compared to the city's process. Moreover, since locating near a university requires permission from the Chamber of Commerce, the lack of trucks near the universities alludes to the possibility that the Chamber of Commerce places a significant amount of red tape around this. As mentioned in the Context chapter, the permitting process is not openly available online for the City of Eugene, thus, it is difficult to make a solid conclusion on the ability of the policy to limit or empower food trucks in this region. However, we can clearly see how difficult or easy it is in comparison to the other options available, such as going through the Chamber of Commerce or Saturday Market. Furthermore, it appears that the policy in Eugene is much more relaxed if trucks operate in pods on private parking lots, this is the case in many instances for trucks such as Ciderlicious!, Da Nang Vietnamese Eatery, and Lani Moku Grill among others, locating in private parking lots for the entirety of the week, ultimately easier for licensing, but detrimental to mobility. Finally, it appears making agreements with local businesses to set up shop in parking lots is the easiest way to navigate the Eugene landscape given that for a seven day period, with 23 trucks, there are 32 unique locations, meaning that there is not very much movement across the city, which I have already discussed in the previous chapter.

6.1.3. Vancouver

Policy wise, Vancouver's Stationary permits aid in the trucks ability to have customers be aware of its location, however, the number of stationary trucks observed outside of their boundary demonstrates that this permit is not able to fulfill the inherent mobile aspirations of a food truck. The Stationary permit, being in the city centre, surrounded by high rise offices filled with hungry professionals has a significant appeal that would sway vendors to want to opt for that stationary permit. Next, the popularity of both Railway Street and Terminal Avenue, even with their truck restrictions, is astounding. The rationale for these restrictions is still unclear, I would assume it is due to the small nature of the street, but speculation is not beneficial. That said, a conclusion cannot be made regarding the popularity and the policy of these streets in particular. Finally, similarly to Boston, there are trucks in this sample that are far outside the boundaries of Vancouver, the policy is ambiguous in terms of how far into the Vancouver metropolitan area it reaches.

6.2 Discussion

Through these analyses, it has been made clear that there is no one way to properly formulate a policy that will benefit food truck operators seeking mobility. As mentioned previously, there are many factors that play into why certain policies are the way they are, such as zoning laws, or other political priorities. Building on this, it appears that cities may not always be the best for the management of the permitting processes. In the case of Boston, the Greenway Conservancy seems to be highly successful in its ability to attract food truck vendors. On the other side of that, Saturday Market, although responsible for a very small portion of the city, seems to have the opposite effect in the food truck licensing process. A great deal of the Greenway's success may stem from its inherent characteristic of being a park. As mentioned, Boston is the only sampled city that allows vending in parks, this seems to be a successful practice that I would recommend the other cities consider adopting. Not only would the food trucks be more successful due to the congregation of people in parks, but it is possible the presence of food trucks would also attract people to parks and encourage a degree of healthy and active living. Next, a dual permit system does not seem to be the most efficient system either. As we have seen in Vancouver, there are many instances of food trucks having to own both permits to be able to achieve the mobility they desire, which adds unnecessary start-up costs to a new food truck owner's balance sheet. What this suggests is that the policy development process

should include all stakeholders and a variety of organizations. This is conducive to the literature surrounding new urban governance, suggesting a push towards participatory processes. Furthermore, the unnecessary policy in the food truck industry in these cities is indicative of the social control aspect of the literature in urban governance. Finally, the limits cities place on permits enforces the notion of economic competition at the city level, creating an illusion of demand due to a lively local food truck industry.

6.3 Conclusion

In sum, Boston appears to have a policy model that is best suited to the mobility of food trucks, the ability to locate in parks and without much restriction at all effectively demonstrates this. Eugene's policy clearly works against mobility, making it obvious that the easiest way to be serving out of a food truck is to operate in a parking lot pod. Vancouver's policy is justifiable in not wanting to oversaturate the downtown core however it negatively affects food truck owners in their desire to be mobile as well as well frequented. I strongly maintain that the ability to locate in parks would alleviate many of the issues faced by food trucks in addition to benefiting community members so long as the trucks are not a disruptive presence. Overall, the policy does stifle mobility in both Vancouver and Eugene but is relatively relaxed in Boston. This is an interesting finding given Boston's ranking as the worst permitting process in the US discussed in Chapter 3.

CHAPTER 7: TWITTER

This final results chapter will tackle my third research question: *To what extent does social media, notably Twitter, play in the localising of food trucks in the sampled cities?* This chapter will follow the structure of the previous two, in that I will report by results from each individual city and then discuss these results within a broader framework of technological mobility.

7.1 Results and Analysis

7.1.1. Boston

In Boston, only 40 of the 97 location reports had been tweeted, meaning 57 had not. Expanding on this, these 40 tweets were only ever tweeted by five of the 16 trucks, on the other hand, one of the trucks, *Roxy's Grilled Cheese Truck*, does tweet, it just does not tweet its location. Further, *Bon Me* has 10 trucks, all separately listed on Street Food App but only one Twitter account. Thus, in reality five of the seven twitter accounts share their locations in their tweets. In the observation period, there was a total of 39 tweets, 24 of which had locational information, meaning 65% of tweets during the week are locational. Within these tweets, almost all included some degree of marketing in addition to the location, be it a description of a product or a picture. Furthermore, within the tweets themselves, in the total 39 tweets, seven included links to their Instagram accounts and four included links to the Street Food App. Spatially, there is no distinct trend as to which locations are tweeted compared to which are not, which can be viewed in Maps 7.1 and 7.2 below.



Map 7.1: Tweeted locations in Boston, MA.



Map 7.2: Non-tweeted locations in Boston, MA.

7.1.2. Eugene

Twitter in the Eugene food truck industry does not seem to be a priority. Of all of the locations reported, only two of them had been tweeted, by two separate trucks. When observing the map, we can see that both of the tweeted locations are in the town's main area but not exactly downtown (Map 7.3), unfortunately, due to having only two data points, this may be a mere coincidence rather than a trend. What is most interesting is that of the 23 trucks in Eugene, it appears that four of the trucks do not even possess a twitter account. Moreover, when we observe content of the overall tweets during the observation period, only 33% contain locational data, all of which contain a link to Street Food App. All of the other non-locational tweets link directly to Instagram posts. Again, keeping in mind that only two trucks tweet, it is difficult to differentiate between what is pattern and what is coincidence.



Map 7.3: Tweeted locations in Eugene, OR.

7.1.3. Vancouver

In the case of Vancouver, all but two locations were reported on Street Food App and only eight were tweeted, leaving 129 locations without a twitter media presence. These eight tweets were put out by four of the total 35 trucks. Looking at the Map 7.4, the most interesting finding is that the locations that are tweeted are ironically in the Stationary permit zone. This would suggest that tweets are sent out as a marketing tactic rather than a locational clue given that most people that follow the truck's account on twitter are pre-existing customers or fans. On the other hand, the overall small number of tweets can be explained by the Stationary permits, since they are not moving, there is no need to inform customers of your location, it can simply be looked up online like any other business. The locations that were not posted to Street Food App were significantly outside of the city boundary, reaching Coquitlam and Surrey, which may ultimately explain why they are not on the app, they simply do not qualify as "Vancouver" locations as per Street Food App. When looking at the content within the tweets, we observe that 10 of the total 16 tweets are promoting a future location, and only four contain locational data for that same day. Finally, in the overall tweets, only two had links to an Instagram account and eight had links to the Street Food App, all eight of these were by the same truck.



Map 7.4: Tweeted locations in Vancouver, BC.

7.2 Discussion

What the previous section has been able to demonstrate is that Twitter is not extremely popular in the food truck world compared to the early beginnings of the industry. Boston is still

holding on to Twitter, however we can see the frequency is nowhere near the same it was even just a few years ago. I would posit this is simply due to the general decline of Twitter in general over the past few years. In response to this, I had expected more links to Instagram accounts, however, it is possible that many of the trucks prioritize Instagram and do not see the value of linking their Twitter accounts to their Instagram accounts, moreover, the presence of Street Food App may have overtaken the need to for tweeting locations. This can explain why so many trucks tweet their Street Food App links. Furthermore, taking in what we have seen in the previous two chapters, mobility is not as frequent as expected, that said, trucks are often in the same locations throughout the course of the week. We can assume that because of this, customers are already aware of where their favourite trucks are, negating the need to update customers on a frequent basis. In a handful of tweets, we see tweets updating or cancelling locations due to unforeseen circumstances. In this case, Twitter, for food trucks is a means of communication rather than localisation. Finally, with the data points available to us, there does not appear to be a spatial pattern of tweeted locations. This is due in part to the small sample we have to work with, already discussed in the Methodology chapter.

7.3 Conclusion

In sum, the data has demonstrated that Twitter does not seem to be a popular localising tool for food trucks. This can be attributed to the lack of mobility seen in the sampled cities as well as the decline of Twitter as medium in general in recent years. Boston appears to have the most social media presence, followed by Vancouver, then Eugene. Notably, Eugene has incredibly limited mobility encouraged by the "pod" method, this, coupled with the small size of the city could explain the minimal Twitter use in Eugene. Vancouver seems to use Twitter more as a marketing tactic rather than localization. All this to say, there is not one clear use of Twitter across the sampled cities, however we can say that Twitter is nowhere near as popular as Street Food App.

CHAPTER 8: CONCLUSION

Throughout this project, looking at the cities of Boston, Massachusetts; Eugene, Oregon; and Vancouver, British Colombia, I have sought to answer three research questions:

- 1. To what extent do food truck mobility patterns vary across the sampled cities?
- 2. Does urban policy limit or encourage mobility across the sampled cities?
- 3. To what extent does social media, notably Twitter, play in the localising of food trucks in the sampled cities?

I have attempted to do so by first looking at two bodies of literature, urban governance and mobility studies and then looking at where the food truck industry fits within these and where my questions fill in existing gaps. I followed this with a brief context chapter wherein I discussed the policies across these three cities at face value, outlining the processes of permit acquisition and locational guidelines. From there I outlined my methodology as well as the limitations of said methods. The following three chapters each looked specifically at one research question to shed a light on the results and analysis of these to hopefully form a cohesive answer to the research questions. This chapter will attempt to synthesize these results, as well as discuss ways in which this small section of academia can grow from what I have learned.

To begin, using data collected from the Street Food App in all three cities over the course of November 4th, 2019 to November 8th, 2019, statistical and visual analyses were conducted. A multitude of maps were created demonstrating locations that do and do not use the Street Food App or Twitter. Maps were also created to compare weekend versus weekday locations. Another map was created to assess the movement of trucks or lack thereof, with a 3D histogram overlaid on the points to show the frequency of which a truck visits a unique location. Through these maps and statistics, we have seen that the three cities cannot, by any means, be compared. They have many variables, such as differences in population, area, density, policies and among many others. That said, results were not consistent across the three cities. The only trend I was able to identify in this project is that mobility, while desirable, does not seem possible due to existing policies. Trucks consistently visited the same location on most days of the week, or in some cases circumvented policy by locating on private property. Furthermore, I have discovered that policy may not be best conducted by government alone or by non-profit alone. Cooperation is important in ensuring that all stakeholders are considered throughout the process to ensure success of such programs. Throughout my analysis I have also discovered that Twitter is decreasing in popularity in the food truck landscape, with apps like Street Food App, and other more popular social media platforms, this is not entirely surprising, but still demonstrating a shift away from the industry's early beginnings.

WORKS CITED

- Abrahale, K., Sousa, S., Albuquerque, G., Padrão, P., & Lunet, N. (2019). Street food research worldwide: A scoping review. *Journal of Human Nutrition and Dietetics*, 32(2), 152-174. doi:10.1111/jhn.12604
- Agueiléra, A. (2019). Smartphone and individual travel behavior. In Aguiléra, A. & Boutueil, V.
 (Eds.) Urban mobility and the smartphone: Transportation, travel behavior and public policy. Amsterdam: Elsevier
- Agyeman, J., & Zavetovski, S. (2015). *Incomplete streets: Processes, practices, and possibilities*. Oxon: Routledge.
- Anenberg, E., & Kung, E. (2015). Information technology and product variety in the city: The case of food trucks. *Journal of Urban Economics*, 90, 60-78. doi:10.1016/j.jue.2015.09.006
- Anjaria, J. S. (2016). *The slow boil: Street food, rights and public space in Mumbai.* Stanford University Press.
- Bailey, R. (1999). Gay politics, urban politics. New York: Columbia University Press.
- Bellamy, R., & Palumbo, A. (Eds.). (2016). From government to governance (The library of contemporary essays in political theory and public policy). Abingdon, Oxon: Routledge, Taylor & Francis Group.
- Ben-Elia, E., Alexander, B., Hubers, C., Ettema, D. (2014). Activity fragmentation, ICT and travel: An exploratory path analysis of spatiotemporal interrelationships. *Transportation Research Part A: Policy and Practice* 68, 56-74.
- Blomgren Bingham, L. (2006). The new urban governance: Processes for engaging citizens and stakeholders. *Review of Policy Research*, 23(4), 815-826.
- Brown, M. (1999). Reconceptualizing public and private in urban regime theory: governance in AIDS politics. *International Journal of Urban and Regional Research*, 23(1) 45–69. http://dx.doi.org/10.1111/1468-2427.00179

Bruns, A. (2005). Gatewatching: Collaborative online news production. New York: Peter Lang.

Caldwell, A. (2011). Will tweet for food. the impact of twitter and New York City food trucks, online, offline, and inline. In Williams-Forson, P. & Counihan, C. (Eds.) *Taking food public: Redefining foodways in a changing world*. New York: Routledge.

- Cardoso, R., Companion, M., & Marras, S. (Eds.). (2014). Street food: Culture, economy, health and governance. London: Routledge.
- Castells, M. (1996). *The rise of the network society, the information age: Economy, society and culture vol. I.* Cambridge, Massachusetts; Oxford, UK: Blackwell.
- Castells, M. (1997). *The power of identity, the information age: Economy, society and culture vol. II.* Cambridge, Massachusetts; Oxford, UK: Blackwell.
- Castells, Manuel (1998). End of millennium, the information age: Economy, society and culture vol. III. Cambridge, Massachusetts; Oxford, UK: Blackwell.
- City of Boston (2016, July 1). *Food truck sites*. City of Boston. Retrieved from https://www.boston.gov/departments/small-business-development/food-truck-sites
- City of Boston (2019a, March 18). *Food truck rules and regulations*. City of Boston. Retrieved at https://www.boston.gov/departments/small-business-development/food-truck-rules-and-regulations
- City of Boston (2019b, April 10). *How to get a food truck permit*. City of Boston. Retrieved from https://www.boston.gov/departments/small-business-development/how-get-food-truck-permit#by-mail
- City of Eugene (n.d.) *Food vending fact sheet*. City of Eugene. Retrieved from https://www.eugene-or.gov/3300/Food-Carts-in-Eugene
- City of Vancouver (n.d.(a)). *Street food stationary vending permits*. City of Vancouver. Retrieved from https://vancouver.ca/doing-business/selling-fveod-on-vancouver-sstreets.aspx
- City of Vancouver (n.d.(b)). *Roaming street food vending*. City of Vancouver. Retrieved from https://vancouver.ca/doing-business/mobile-food-vending.aspx
- Coleman, R. (2007). Surveillance in the city. In P. S. Hier & G. Greenberg (Eds.), *The surveillance studies reader* (pp. 231–224). Maidenhead: McGraw Hill/Open University Press.
- Couclelis, H. (2009). Rethinking time geography in the information age. *Environment and Planning*, *41*(7), 1556-1575.
- Coxon, S., Napper, R. & Richardson, M. (2011). Urban Mobility Design. Amsterdam: Elsevier.
- Cruikshank, B. (1999). *The will to empower: democratic citizens and other subjects*. Cornell University Press.

- Crystal, T. (2013). A hungry industry on rolling regulations: A look at food truck regulations in cities across the United States. *Maine Law Review*, 65(2).
- da Cruz, N.F., Rode, P. & McQuarrie, M. (2019) New urban governance: A review of current themes and future priorities. *Journal of Urban Affairs*, 41(1). DOI: 10.1080/07352166.2018.1499416
- De Jesus, S. (1994). Environmental communication: Design planning for wayfinding. *Design Issues*, *10*(3), 33-51. doi:10.2307/1511691
- De Lima, D. P., Medeiros, C. O., Dardin, F. D., & Stangarlin-Fiori, L. (2019). Implementation of good hygiene practices in food trucks with and without the intervention of a food safety expert. *Journal of Food Safety*, 39(3).
- Dinh, L. (2011). America's automobile mania. The Guardian. 22 February 2011. Retrieved from https://www.theguardian.com/commentisfree/cifamerica/2011/feb/22/south-carolinausdomesticpolicy.
- Ehrenfeucht, R. 2017. Do food trucks and pedestrians conflict on urban streets? *Journal of Urban Design*, 22(2), 273-290, DOI: 10.1080/13574809.2017.1281731
- Fainstein, S. S. & Fainstein, N. I. (1983) Regime strategies, communal resistance, and economic forces. In Fainstein S.S., Fainstein, N.I., Child Hill, R., Judd, D. & Smith, P (Eds.). *Restructuring the city: The political economy of urban redevelopment*. New York: Longman.
- Farrel, M. (2007, February 2). How to run a restaurant: Start-up costs. Retrieved from www.forbes.com/2007/02/02/visa-american-express-ent-managecx mf 0202fundamentalscosts.html#6ecc2a9d45aa.
- Foucault, M. (1995). *Discipline and punish: the birth of the prison*. 2nd Vintage Books ed. New York NY: Vintage Books.
- Fouts, S. (2018). Re-regulating loncheras, food trucks, and their clientele: Navigating bureaucracy and enforcement in New Orleans. *Gastronomica*, *18*(3), 1-13.
- Fox, C. J. & Miller, H. T. (1995). Postmodern public administration: Toward discourse. London: SAGE Publications Ltd.
- Freybote, J., Fang, Y., & Gebhardt, M. (2017). The impact of temporary uses on property prices: The example of food trucks. *Journal of Property Research*, 34(1), 19-35, DOI: 10.1080/09599916.2017.1288163

- Gerald Collins, S., Durington, M., Favero, P., Harper, K., Kenner, A. & O'Donnell, C. (2017) Ethnographic apps/apps as ethnography. *Anthropology Now*, 9(1), 102-118. doi: 10.1080/19428200.2017.1291054
- Griffin, M. R. (2019, August 6). Guide to Eugene food truck pods. Eugene Cascades Coast. Retrieved from https://www.eugenecascadescoast.org/blog/post/guide-to-eugene-foodtruck-pods/
- Gupta. J., Verrest, H., and Jaffe, R. (2015). Theorizing governance. In Gupta, J., Pfeffer, K.,
 Verrest, H., & Ros-Tonen, M. (Eds.), *Geographies of urban governance: Advanced theories, methods and practices*. Cham: Springer. doi:10.1007/978-3-319-21272-2
- Harding, A. (1999). Review article: North American urban political economy, urban theory and British research. *British Journal of Political Science*, *29*, 673–698.
- Harkness, A. J. & Katz, B. (2016). Why urban governance matters now more than ever. Brookings Institution. Retrieved from: https://www.brookings.edu/blog/metropolitanrevolution/2016/04/12/why-urban-governance-matters-now-more-than-ever/
- Harvey, D. (1987). Flexible accumulation through urbanization. Antipode, 19(3), 260–287.
- Harvey, D. (1989). From managerialism to entrepreneurialism: The transformation in urban governance in late capitalism. Geografiska Annaler. Series B, *Human Geography*, 71(1), 3-17.
- Haus, M., Heinelt, H., & Stewart, M. (Eds.). (2005). Urban Governance and Democracy. London: Routledge, https://doi.org/10.4324/9780203340950
- Hendrix, M. & Bowdish, L (2018). Food truck nation: Food truck index. U.S. Chamber of Commerce Foundation. Retrieved from https://www.foodtrucknation.us/wpcontent/themes/food-truck-nation/Food-Truck-Nation-Full-Report.pdf
- Hinton, S. & Hjorth, L. (2013). Introduction to social media. In *Understanding social media* (pp. 1-6). London: SAGE Publications Ltd doi: 10.4135/9781446270189.n1
- Hohn, U & Neuer, B (2006). New urban governance: Institutional change and consequences for urban development, *European Planning Studies*, 14(3), 291-298, DOI: 10.1080/09654310500420750
- Imbroscio, D. L. (2004). The imperative of economics in urban political analysis: A reply to Clarence N. Stone. *Journal of Urban Affairs*, 26(1), 21–6. http://dx.doi.org/10.1111/j.0735-2166.2004.00002.x

Jacobs, J. (1961). The death and life of great American cities. New York: Random House Inc.

- Jonas, A. and Wilson, D. (1999). The city as a "growth machine": critical reflections two decades later. In A. Jonas and D. Wilson (Eds.), *The urban "growth machine": Critical perspectives two decades later*. Albany, NY: State University Press of New York.
- Jenkins, H. (2006). *Convergence culture: Where old and new media collide*. New York: New York University Press.
- Karimi, H. A. (2011). Universal navigation on smartphones. Boston: Springer. https://doi.org/10.1007/978-1-4419-7741-0
- Kaufmann, V. (2003). *Re-thinking mobility : Contemporary sociology*. London: Routledge, https://doi.org/10.4324/9781315244303
- Koch, R. (2015). Licensing, popular practices and public spaces: An inquiry via the geographies of street food vending. *International Journal of Urban and Regional Research*, 39(6), 1231-1250. doi:10.1111/1468-2427.12316
- Laporte, N. (2014, November 18). How Roy Choi built an empire from one beat-up taco truck. Retrieved from https://www.fastcompany.com/3038398/how-roy-choi-built-a-foodempire-from-one-beat-up-taco-truck
- Lauria, M. (Ed.) (1997). Reconstructing urban regime theory: Regulating urban politics in a global economy. Thousand Oaks, CA: SAGE Publications Ltd.
- Lee, U. (2019, July 20). How Vancouver's food trucks were stalled by regulations. CBC News. Retrieved from https://www.cbc.ca/news/canada/british-columbia/creative-networkabout-here-street-food-1.5212377
- Leitner, H. (1990). Cities in pursuit of economic growth: the local state as entrepreneur. *Political Geography Quarterly*, *9*(2), 146–170.
- Lenz, B., Nobis, C. (2007). The changing allocation of activities in space and time by the use of ICT - "Fragmentation" as a new concept and empirical results. *Transportation Research Part A: Policy and Practice 41*(2), 190-204
- Logan, J. and Molotch, H. (1987). Urban fortunes: The political economy of place. Berkeley, CA: University of California Press.
- Lynch, K. (1960). The image of the city. Cambridge, Mass: MIT Press.
- Lynch, K. (1984) Reconsidering the image of the city. In: Rodwin L., Hollister R.M. (Eds.) *Cities of the mind. Environment, development, and public policy*. Springer, Boston, MA

- MacLeod, G. (2011). Urban politics reconsidered: "growth machine" to post-democratic city? *Urban Studies*, 48(12), 2629-2660
- MacLeod, G. and Goodwin, M. (1999). Space, scale and state strategy: rethinking urban and regional governance. *Progress in Human Geography*, *23*, 503–527.
- Mehta, V. (2009). Look closely and you will see, listen carefully and you will hear: Urban design and social interaction on streets. *Journal of Urban Design*, 14(1), 29-64, DOI: 10.1080/13574800802452658
- Middleton, C.A. (2008). Do mobile technologies enable work-life balance? *Mobility and Technology in the Workplace 9*, 209
- Mills, C. W. (1956). The power elite. New York, NY: Oxford University Press.
- Molotch, H. (1976). The city as a "growth machine": Toward a political economy of place. *American Journal of Sociology*, 82(2), 309-332.
- Mossberger, K. (2009). Urban regime analysis. In Davies, J. S. & Imbroscio, D. L. (Eds.), *Theories of urban politics*. London: SAGE Publications Ltd.
- Murdoch, J. (2006). Spaces of discipline and government. In *Post-structuralist geography: A guide to relational space* (pp. 29-55). London: SAGE Publications Ltd doi: 10.4135/9781446221426.n2
- Norman, D. (2004). *Emotional design: Why we love (or hate) everyday things*. New York NY: Basic Books
- Okumus, B., Sönmez Sevil, Moore, S., Auvil, D. P., & Parks, G. D. (2019). Exploring safety of food truck products in a developed country. *International Journal of Hospitality Management*, 81, 150–158. https://doi.org/10.1016/j.ijhm.2019.02.011
- Prasad, R., & Ruggieri, M. (2003). *Technology trends in wireless communications*. London: Artech House.
- Raco, M. (2009). Governance, urban. In Thrift N. & Kitchin R. (Eds.), *International encyclopedia of human geography*. Amsterdam: Elsevier.
- Reese, L. & Rosenfeld, R. A. (2001). Yes, but ...: Questioning the conventional wisdom about economic development. *Economic Development Quarterly*, 15, 299–312. http://dx.doi.org/10.1177/089124240101500402

- Reeve A. (2019). Exercising control at the urban scale: Towards a theory of spatial organisation and surveillance. In Flynn S., Mackay A. (Eds.), *Surveillance, architecture and control*. Cham: Palgrave Macmillan.
- Rhodes, R. A. W. (1996). The new governance: Governing without government. Political Studies, 44(4), 652-667. https://doi.org/10.1111/j.1467-9248.1996.tb01747.x
- Rose, N. S. (1999). Powers of freedom: Reframing political thought. Cambridge UK: Cambridge UK: Cambridge UNiversity Press.
- Rosenau, J. N. (1992). Citizenship in a changing global order. In Rosenau, J.N. and Czempiel E-O. (Eds.), *Governance without government*. Cambridge: Cambridge University Press.
- Russo, E. (2016, June 6). *Riding the food truck craze*. The Register Guard. Retrieved from https://www.eugene-or.gov/3300/Food-Carts-in-Eugene
- Saturday Market, Inc. (n.d.) *Food cart information and application*. Activity Permit Calendar. Retrieved from https://www.eugenesaturdaymarket.org/activity-permits.html
- Siu, L. (2013). Twenty-first-century food trucks: Mobility, social media, and urban hipness. In *Eating Asian America: A Food Studies Reader*. pp. 231-244. Boston, Massachusetts: Credo Reference.
- Sonenshein, S., Nault, K., & Obodaru, O. 2017. Competition of a different flavor: How a strategic group identity shapes competition and cooperation. *Administrative Science Quarterly* 2017, 62(4), 626–656. DOI: 10.1177/0001839217704849
- Starchefs. (n.d.). Chef Roy Choi of Kogi Barbecue Truck Biography. Retrieved from https://www.starchefs.com/cook/chefs/bio/roy-choi.
- Stone, C. (1989). Regime politics: The governing of Atlanta 1946–1988. Lawrence, KS: University Press of Kansas.
- Stone, C. (1993). Urban regimes and the capacity to govern: a political economy approach, *Journal of Urban Affairs*, *15*, 1–28.
- Tinker, I. (1997). *Street foods: Urban food and employment in developing countries*. Oxford University Press.
- Turner, S., & Oswin, N. (2015). Itinerant livelihoods: street vending-scapes and the politics of mobility in upland socialist Vietnam. *Singapore Journal of Tropical Geography*, 36(3), 394–410. https://doi.org/10.1111/sjtg.12114

- Urry, J. (2000a). Mobile sociology¹. *The British Journal of Sociology*, *51*, 185-203. doi:10.1111/j.1468-4446.2000.00185.x
- Urry, J. (2000b). *Sociology Beyond Societies*. London: Routledge, https://doi.org/10.4324/9780203021613
- Urry, J. (2007). Mobilities. Cambridge: Polity Press.
- Van Djick, J. (2013). *The culture of connectivity: a critical history of social media*. Oxford: Oxford University Press.
- Von Schönfeld, K. C. & Bertolini, L. (2017). Urban streets: Epitomes of planning challenges and opportunities at the interface of public space and mobility. *Cities*, 68, 48-55.
- Wessel, G. (2012). From place to nonplace: A case study of social media and contemporary food trucks. *Journal of Urban Design*, *17*(4), 511-531.
- Wessel, G., Ziemkiewicz, C., & Sauda, E. (2016). Revaluating urban space through tweets: An analysis of twitter-based mobile food vendors and online communication. *New Media and Society*, 18(8), 1636-1656. doi:10.1177/1461444814567987
- Wood, A. (2004). Domesticating urban theory? US concepts, British cities and the limits of cross-national applications. *Urban Studies*, *41*(11), 2103–2118.
- Young, I. M. (2000). Inclusion and democracy. Oxford: Oxford University Press.
- Zappavigna, M. (2012). *Discourse of Twitter and social media : How we use language to create Affiliation on the Web.* London: Continuum.
- Zukin, S. (1991). Landscapes of power : From Detroit to Disney World. University of California Press.

APPENDIX A: MAPS



Map A: Locations not posted to Street Food App in Boston, MA.



Map B: Locations posted on Street Food App in Boston, MA.



Map C: Tweeted locations in Boston, MA.



Map D: Non-tweeted locations in Boston, MA.



Map E: 3D map of individual trucks' frequency to visit same location in Boston, MA.



Map F: Locational hotspots in Boston, MA.



Map G: Tweeted locations in Eugene, OR.



Map H: Non-tweeted locations in Eugene, OR.



Map I: Weekend locations in Eugene, OR.



Map J: Weekday locations in Eugene, OR.



Map K: 3D map of individual trucks' frequency to visit same location in Eugene, OR.



Map L: Locational hotspots in Eugene, OR.



Map M: Tweeted locations in Vancouver, BC.



Map N: Non-tweeted locations in Vancouver, BC.



Map O: Weekend locations in Vancouver, BC.



Map P: Weekday locations in Vancouver, BC.



Map Q: 3D map of individual trucks' frequency to visit same location in Vancouver, BC.



Map R: Locational hotspots in Vancouver, BC.